FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

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FEEDSTUFFS *Features This Week*

IMPROVING EFFICIENCY—An Arkansas broiler firm, feeding out 2 million birds, improves efficiency by mill renovation. **Page 23.**

DAIRY FEEDING—Dr. C. F. Huffman, Michigan State University, discusses high level grain feeding of dairy cows on **page 38.**

WISCONSIN BROILER OPERATION—A long-term broiler project helps a Wisconsin feed man in servicing his poultry customers. **Page 46.**

OUTSIDE SALES—That an outside salesman for a feed company is a professional is the point of this feature article. **Page 80.**

LAYING DIETS—The question "Should laying diets be changed as the egg production period progresses?" is answered on **page 95.**

—REGULAR FEATURES—

Putting Research to Work	10	Feedstuffs Monthly Index	82
Up or Down	30	Worth Looking Into	90
Convention Calendar	63	Classified Ads	102
Joe Brooks	78	Feed Markets in Detail	106

Turkey Industry Told of Possible Control Moves

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—Determination on the part of some turkey industry leaders to evolve some method of industry control, and USDA willingness to invoke supply-management techniques, indicate that as a result of a two-day meeting here this week, some type of controls — marketing orders and agreements, or a single national order—may be invoked later.

Meeting with USDA officials was an industry committee which was named under new legislation authorizing a marketing order for turkeys and/or turkey hatching eggs. (Also see accompanying story on the appointment of the committee.)

It is understood that the discussions held Oct. 12-13 have at this writing been merely those of explanation on the part of USDA officials, who have told committee members just what might be available to them under the new law. It was considered improbable that any final decisions could be reached this week, and it was expected that there would

(Turn to CONTROL MOVES, page 109)

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USDA Names Group To Study Turkey Market Problems

WASHINGTON—At the request of the turkey industry, Charles S. Murphy, acting secretary of agriculture, this week named an industry-wide Turkey Advisory Committee to study the market situation and advise the secretary of agriculture in connection with "self-help plans or legislation it considers necessary to enable the industry to manage supplies, stabilize markets, and maintain prices fair to producers and consumers."

The naming of this committee follows a meeting of industry representatives with U.S. Department of Agriculture officials Aug. 15 to explore

(Turn to USDA STUDY, page 109)

Ag Economists Predict Feed, End Product Prices

LAFAYETTE, IND. — Economists have made some specific forecasts of feed and end product prices for the coming year.

Providing a quick view of the outlook for the year beginning Oct. 1, agricultural economists at Purdue University forecast: Corn prices at harvest of 90¢ to $1 bu.; protein feed prices 5 to 15% below 1960-61; hog prices $1 to $3 below the average for the 1960-61 marketing year; fat cattle prices averaging a little lower; "substantially less favorable" returns from layers; broiler prices for the

(Turn to PREDICTIONS, page 105)

Custom Farms Will Begin Market Test

HARRISBURG, PA. — Custom Farms, Inc., will launch its operation in Rochester, N.Y., Nov. 1, according to directors.

In a meeting in Harrisburg, it was announced that the fledgling corporation has received Securities and Exchange Commission clearance for the sale of 2,500 shares of stock at $100 a share, to begin as soon as various states have had time to clear

(Turn to MARKET TEST, page 109)

Centennial Event Is Industry Salute To Land-Grant Idea

KANSAS CITY—The feed industry will play a starring role in recognizing the importance of land-grant colleges and state universities over the past 100 years and in the future when the Midwest Feed Manufacturers Assn., in cooperation with the land-grant institutions in the organization's eight-state area, sponsors the Centennial Nutrition Conference here Oct. 22-25 at the Muehlebach Hotel.

Of special significance is the fact that this conference, initiated within the feed industry, is the first major event of a year-long, national program observing the centennial an-

(Turn to CENTENNIAL, page 105)

Broiler Industry Looks for Better Days

By ROBERT H. BROWN
Feedstuffs Special Correspondent

ATLANTA—Like the carnival man at the state fair says: Round and round she goes, and where she stops no one knows. The broiler translation might be: Up and down she goes, and where she will stop no one knows.

Threats of even lower broiler prices have been plaguing the industry, but there is always a silver lining, and the feeling this week was that if the next 60 days can just be passed without too drastic a change, better days are ahead. The entire industry today is looking toward New Year's Day because they are hopeful it will bring a new day.

What was worrying producers early this week was the prospect of the loss of the 10¢ price. Effort was being made to at least maintain this level and keep prices from dropping to a second new low for all history.

The week opened weak but seemed to pick up steam as a result of the caulking of the price dam. On the Georgia market the week opened with a price range of 9½¢ to 10½¢, with the most quoted 10¢. However, it was noted that discounting was prevailing and prices were given only in isolated cases. The supply was ample and the demand was fair.

As the week progressed, it appeared that efforts to buoy the market to at least 10¢ were making head-

(Turn to BROILERS, page 108)

Minnesota Turkeymen Open Drive to Sell Bird to Every Family

By FRED E. TUNKS
Feedstuffs Staff

MINNEAPOLIS — A conversation revealed that a grower gave up on below-cost-priced turkeys three months ago and started feeding hogs and sheep so his turkey houses wouldn't stand empty.

Two men responsible for the growing of a million turkeys a year said they had cancelled orders for many thousands of poults that would have become market turkeys in 1962.

A tough, up-hill first year for a turkey growing operation organized a year ago by a group of professional men with an investment of $50,000 was candidly described by one of the investors.

Ordinarily, talk such as this would amount to a gloomy atmosphere for any gathering. But there were smiles on the faces of many Minnesota turkey industry representatives here at the Calhoun Beach Hotel the evening of Oct. 12 because they had discovered that their "crisis" had created a state-wide, industry-wide unity strong enough to launch an enthusiastic, powerful turkey consumption promotion effort.

Scores of turkey growers, feed

(Turn to MINNESOTA, page 109)

Soybean Oil Meal Reverses Trend

By F. C. BISSON
Feedstuffs Special Correspondent

CHICAGO—After having been on a downhill road for five or six weeks, soybean meal prices did somewhat of a "U" turn this week. Prices Oct. 11 were $3 to $4.50 per ton higher than Oct. 4.

The government, making efforts to dispose of the tremendous surplus of beans raised this year and apparently greatly worried over the fact that its late September announcement about

(Turn to SOYBEAN MEAL, page 108)

Nutrition Conference Sees—

Eyes of Texas on Cattle Feeding

By FRED E. TUNKS
Feedstuffs News Editor

COLLEGE STATION, TEXAS—Poultry nutrition research reporting didn't take a back seat, but it did give some ground to the cattle feeding industry when Texas A&M College conducted its annual nutrition conference here last week.

And this is as it should be, because the eyes of Texas, long recognized as the leading producer of feeder cattle, are winking like a human wolf in a flirtation with cattle feeding.

It was pointed out here that cattle feeding has grown tremendously in the Southwest during recent years—and this expansion is expected to keep rolling along at an accelerated pace. Texans say they have the resources—from feed to financing—and the environment to bring their state into the cattle feeding spotlight.

Along with the optimistic views of Texas' cattle feeding future, important data on beef nutrition, especially concerning vitamin A requirements, were reported.

Following are summaries of some of the beef-related talks heard at the conference (summaries of other Texas Nutrition Conference reports will appear in subsequent issues of Feedstuffs):

VITAMIN A REQUIREMENTS OF BEEF CATTLE—Dr. W. M. Beeson,

(Turn to TEXAS, page 109)

Uncle Johnny Mills' Control Changes

HOUSTON—Controlling interest in Uncle Johnny Mills, Inc., has been purchased by E. A. Rossi, Houston business man.

It is reported that the transaction took place late in August. However, formal notification of Uncle Johnny dealers and customers was not made until Sept. 25.

No changes in personnel have been made, according to officials. But a number of changes in facilities, aimed

(Turn to UNCLE JOHNNY, page 105)

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Top of the Hopper

THE FEED INDUSTRY HAS the unique privilege of sponsoring, along with eight land-grant colleges and universities, the first major event of the year-long observance of the 100th anniversary of the establishment of the land-grant college educational system.

These colleges and universities have had a profound influence on the growth and strength of the nation, and a salute to their achievements during this academic year is a most appropriate gesture for all Americans. Feed men, fortunately, can be among the first to do so.

The arts, the physical sciences and other areas of education, of course, will receive appropriate recognition during the centennial year, but the spotlight will be focused on the biological sciences—specifically, animal and human nutrition, during the Centennial Nutrition Conference at the Muehlebach Hotel during those very important three days, Oct. 23-25.

The contributions of the educational institutions to American well-being and security through improved efficiency of animal and poultry foods can be measured in positive terms—perhaps more so than in many other areas of educational and research endeavor. An outstanding program has been arranged by the Midwest Feed Manufacturers Assn. and the participating colleges and universities (see story on page 1). The feed industry, whose own contributions to improved agriculture are so closely tied to campus-based research and teaching, should be represented to the fullest extent possible at the conference to learn and, perhaps more importantly, demonstrate its sincere appreciation of the educators who are its partners in science.

GRADUAL MOVEMENT away from custom and special mixing and toward fewer feed formulas, more standard types of feed and less production according to the specific order of feeders has been reported by a number of feed mill representatives in various parts of the nation in recent weeks.

In general, feed men who have said they are less enthusiastic about making special order feeds have given these reasons for their point of view:

The feed man, by virtue of his profession, knows better than the feeder what formulas will do the most for the least cost. Feeds formulated according to the feed man's knowledge rather than to the feeder's whims will mean better and faster service and better profits for the feeder and reduced production costs for the feed man.

While both custom mixing and special mixing may entail formulation as specifically directed by the customer, there can be differences between the two. "Custom mixing" is a term most commonly used in the Midwest in reference to a feeder bringing grain to a mill to have it ground and mixed with a supplement provided by the feed man. "Special mixing" is likely to be used to denote an arrangement under which a feed mill supplies a special mix as specifically ordered by a feeder.

Feedstuffs reported in the past that a midwestern feed manufacturer said in a talk before a feed industry gathering: "In some areas, the small elevator and custom feed mill that has tied the future to custom grinding and mixing can expect that business to be almost eliminated in the next decade."

Another midwesterner said: "We do no custom mixing because we feel the feed designed for the purpose will do a better job for the customer and it simplifies our production problems."

Still another comment from the Midwest: "Our program of complete pelleted feeds delivered to the feeder in bulk simplifies his labor problems. He no longer needs to spend time and labor at the mill to get a custom job done."

(Turn to TOP OF THE HOPPER, page 111)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Feed men in many parts of the nation are still awaiting the traditional fall upturn in business volume. This week saw improvement in business in the South Central, Ohio Valley and Southeast areas, perhaps foretelling a general business upswing.

Some of the slackness of business in other regions was attributed to the fact that farmer customers are busy with their harvesting activities.

Cattle and dairy feed sales are picking up, and hog feed continues as a good sales item in its areas. Broiler volume is off in most areas, and turkey volume continues to decline.

Price lists will be little different from the previous ones issued by most mills, according to industry spokesmen.

Wholesale feedstuff price index declined 1.1 points to 74.6 this week. That figure compared with 72.9 for a year earlier. The feed-grain index edged up to 62.9 this week; it had been 62.4 a week before and 61.9 a year ago.

The hog-corn ratio, based on Chicago prices, improved slightly and was 16.9 this week, up 0.5 from a week earlier and 0.7 above a year earlier. (Major market roundup and ingredient quotations appear on pages 106-108.)

Northwest

Business volume this week is about the same to slightly lower, say most formula feed manufacturers in the Northwest. One feed man said he thinks the anticipated upswing is fast approaching.

Another firm reported that business in the western part of the region is increasing as feeder cattle move in. Hogs are still providing a good steady volume for the mills. Turkey feed demand is slowing each week.

Some improvement in dairy feed demand was also noted.

Price lists on feeds will vary little from the earlier ones. Some concentrates are expected to reflect the upswing in the price of soybean meal. Higher millfeed prices were expected to have their effect on dairy rations.

Southwest

Formula feed business in the Southwest is continuing the pattern of the last few weeks, with mixers generally operating on a full five-day basis and occasionally six days.

Cattle feed business is still good with reports of additional cattle feed bookings and with some mills reporting good shipments of current range feeds.

Mixers report that sales of hog concentrates and pig feeds are still a large share of the volume, and this business is expected to continue.

Broiler feed sales are still heavy in spite of a poor return of the finished product, and this situation reflects the record broiler chick hatches of the August and September period. The turkey business is showing signs of further declining in volume but is still sizeable in quantity.

Northeast

Dairy feeds and egg mashes were the backbone of the formula feed market as sales held steady with the previous week. There was a tendency to more mixed dairy feeds as consumers turned to the use of oats and other on-the-farm grains.

Turkey feed demand continues to fall off as more growers "finish" their birds for slaughtering. Broiler feeds remained in the doldrums.

Egg prices were steady in New York but levels in the New England area ended off 3¢ after a week of irregular price movements. Broiler prices in the latter area backed down to the 12 to 13¢ lb. level.

Some trade sources look for continued declines in the ingredient market because of abundant supplies—including the glut in soybeans—and big carryovers. They also figure that broiler and turkey growers will have "enough sense" to cut down on their production, and, as a result, the trade will have fewer units to feed next year.

Warm, sunny weather in the western New York area has rounded out crops in fine shape after poor growing conditions early in the season.

Running time of formula feed manufacturers averaged from 40 hours in the western New York area to 36 to 40 hours in the New England states. In the latter section there is a tendency to taper off in the first week of the month.

Southeast

Formula feed business in the Southeast is showing signs of improving.

Broiler feed manufacturers' running time is about 70% of normal due to the cut-back in placements of chicks. Broiler prices have not improved, with sales still being made at 10¢ lb., f.o.b. the farms.

With continued hot weather and practically no rain, pastures are beginning to dry up, and many cattlemen and dairymen have picked up on their usage of feeds.

There have been some reports of accounts receivable problems in this area.

Ohio Valley

There was a slight turn for the better in the feed business this week. More optimism was expressed, but most manufacturers feel the expected big push will not materialize for some time yet.

In another week or two, demand for turkey feeds is expected to be down to dribbles. However, during the week, there was a good pickup in demand for dairy feeds, and hog and cattle feed demand remained good.

Prices for both poultry and eggs remained steady as the demand was just fair.

South Central

Business is better in formula feeds this week and operations at several plants have been stepped up. Overtime runs are not uncommon, and some mills report that six-day runs are needed to keep up with the increased flow of orders.

Outlets are especially good in hog and cattle feeds. Some improvement is noted in dairy feed business, but poultry feed sales are just about holding their own.

Cattle feed bookings are going very well, promising good running time into the winter months. Hog feed bookings are also being offered, and in at least one instance, the en-

(Turn to MARKETS, page 111)

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Dr. John King Heads Cyanamid Agricultural Research, Development

PRINCETON, N.J.—The appointment of Dr. John A. King to the position of manager of research and development of the American Cyanamid Co.'s agricultural division was announced by C. D. Siverd, division general manager. Dr. King replaces Dr. J. T. Thurston who will not be moving to the division's new agricultural center near Princeton, N.J.

Prior to joining Cyanamid in October, 1960, Dr. King was director of research and general manager for the research division of Armour & Co. He has had 15 years experience in medicinal research at the Winthrop Chemical Co. and the Warner-Chilcott Research Laboratories. He is associated with ten U.S. patents and with numerous corresponding foreign patents. Dr. King also has had 45 scientific papers published, principally in the Journal of the American Chemical Society.

Effective immediately, the following department heads located at the center will report to Dr. King: Dr. J. P. English, director of chemical research; Dr. F. L. Stark, director of plant science research; Dr. J. S. Kiser, director of animal science research; Dr. J. F. Yost, director of plant industry development; Dr. S. Brackett, director of animal industry development; Dr. J. H. Ware, director of product research laboratory; F. R. Barron, government registration manager; and Rhoda Alverson, technical service information manager.

Under Dr. King's direction the newly coordinated research efforts at the agricultural center will be directed toward the development of new and improved products for animal and plant production and protection. Dr. King will report directly to the division's general manager, Mr. Siverd, whose offices are now in the administration building at the center.

Dr. King obtained his A.B. degree from the University of Indiana in 1937 and his M.S. and Ph.D. degrees from the University of Minnesota. He resides with his wife and family at 90 Battle Road, Princeton, N.J.

Corn Yield Forecast Exceeds Record

WASHINGTON—An Oct. 1 yield forcast of 60.5 bu. an acre for corn is .1 bu. above a month earlier and 6 bu. over the record 1960 yield of 54.5 bu., the U.S. Department of Agriculture crop production report summary as of Oct. 1 has indicated.

Indicated 1961 production of the four feed grains totals 137.2 million tons, up slightly from a month ago, but 17.5 million tons less than the 1960 total, according to the report. Production of corn for grain is now forecast at 3.53 billion bushels, up slightly from the Sept. 1 forecast.

The improved corn prospects more than offset a small decline in expected production of grain sorghums. Indicated average yield of sorghum grain at 43.9 bu. acre, still is up sharply from the previous high of 39.8 bu. set last year.

Though the yield is a record high, the overall prospects for 478 million bu. are 21% below the 1960 crop.

Soybean production is now estimated at 710 million bu., down 10 million bu. from a month ago, but still 27% above last year's crop and 22% above the previous record large crop of 1958.

New estimates of oats and barley production are not made in October.

Turkey Firm's Survey Shows Opposition to Government Controls

SONOMA, CAL.—A strong majority of the turkey industry representatives who attended the recent annual conference of Nicholas Turkey Breeding Farms, Inc., indicated opposition to government programs regulating the number of turkey hatching eggs, poults and turkeys to be marketed in 1962.

Nicholas Turkey Breeding Farms reports in its October newsletter that feed men, processors, hatcherymen, hatching egg producers and turkey growers—some 80 in all—were asked to fill out a questionnaire at the conference, which was held here Sept. 8-9. This survey showed that of the 59 persons who filled out the questionnaire:

- Three were for regulating the number of turkey hatching eggs to be marketed in 1962; 49 were against, and 7 had no opinion.
- Three were for regulating the number of poults to be marketed in 1962; 50 were against, and 6 had no opinion.
- Four were for regulating the number of turkeys to be marketed in 1962; 48 were opposed, and 7 had no opinion.

Following are some of the reasons why opposition to government regu-

(Turn to SURVEY, page 105)

Priebe Creditors Have First Meeting

By Special Correspondent

CHICAGO — Forty-five persons, representing creditors who have close to $1 million in claims against Priebe & Sons, Inc., and its wholly owned subsidiary, Priebe Poultry Co., met for the first time here Oct. 12 and formed a creditors' committee.

The meeting, held in the offices of Midwest Credit Management Assn., was in connection with the petition to federal district court by the poultry firm asking to continue in business pending possible realignment. (Feedstuffs, Oct. 7.)

James Imbrie, Jr., manager of Midwest Credit Management, termed the first meeting a "very satisfactory one, with much preliminary progress being made."

Heading the creditors' committee is Jack Zeisler of Hales & Hunter Co. Other creditor firms represented on the group are the Ralston Purina Co., Carolina Hatcheries, General Mills and Quaker Oats Co. Mr. Imbrie is serving as secretary. The committee has scheduled its first meeting for Tuesday, Oct. 17.

Priebe, which has two plants in North Carolina, three in Iowa and one in Arkansas, is said to be in financial difficulty due to extremely low prices for broilers and turkeys.

The petition to federal court lists over $500,000 indebtedness by Priebe & Sons and over $400,000 by Priebe Poultry Co.

Officials of the firm have indicated an attempt will be made to keep all plants operating.

Broiler Production Credit Up Sharply Over Year Earlier

ATLANTA—End-of-the-month outstandings of both feed trade credit and bank loans for broiler production were sharply higher for August of this year than a year earlier in the six-state commercial broiler producing area served by the Federal Reserve Bank of Atlanta.

The bank's latest broiler production credit survey report shows that trade credit outstandings for broiler production at a sample of feed manufacturing firms were up 26% in August compared with a year earlier. For credit to dealers, the increase was 25%; to producers the indicated increase was 31%.

From July to August, the Atlanta bank's survey shows, trade credit outstandings increased only 1%. Slight gains in dealer accounts more than offset slight declines in producer accounts.

Collections on credit advanced by surveyed feed manufacturers during August, 1961, were 13% greater than during August, 1960, and 19% greater than during July, 1961.

Bank Credit

In the bank credit category, end-of-the-month outstandings for August, 1961, ammounted to $2,207,000—7% less than a month earlier, but 19% more than a year earlier. The Federal Reserve Bank's research department noted that bank accounts with both dealers and broiler producers were reduced from July to August because repayments exceeded new loans. New loans to dealers and also producers during August totalled $2,151,000—3% under a month earlier, but a stunning 242% over a year earlier. Repayments during August amounted to $2,313,000—a gain of 7% from July and a gain of 172% compared with August, 1960.

Varied Poultry Topics At Indiana Meeting

INDIANAPOLIS, IND.—Poultrymen attending the 43rd annual meeting of the Indiana State Poultry Assn. here Oct. 24-25 will gain information on a variety of topics pertaining to the poultry industry.

Dr. J. Holmes Martin, head of the poultry science department, Purdue University, Lafayette, Ind., will report on the poultry industry in Brazil; Dr. Richard Kohls, agricultural economist at Purdue, will explore the future in the industry; Richard M. Hanson, first vice president of the American Poultry & Hatchery Federation, Corvallis, Ore., will have for a topic "Programming Information Into Poultry Operations."

Prof. Robert R. Dince, school of business, University of Georgia, Athens, will talk on estimating capital needs, and the first day's program will be rounded out with a broiler industry round table discussion by four authorities in the field.

On the second day, Dr. A. A. Kraft, Iowa State University, Ames, will tell how nature protects eggs and poultry to increase the shelf life. There will be talks on environmental control, employee training, the government, housing costs in Michigan, and on the topics "Futures—A Cost or a Dividend" and "Lights—Hormones—Eggs."

The program will be at Hotel Severin, Indianapolis.

Layers on Farms Up 2% Oct. 1

WASHINGTON—Number of layers on farms was up 2% Oct. 1 compared to the same date a year ago, according to the U.S. Department of Agriculture.

Total layers as of that date were 295,004,000. Three regions had increases—south central (8%), and south Atlantic and western (7%). Showing decreases were east north central (4%), north Atlantic (2%), and west north central states, (1%).

Potential layers (hens and pullets of laying age plus pullets not of laying age) were down in number as of Oct. 1 with an estimated 373,064,000, compared with 374,295,000 at the same time a year ago. The increase in pullet numbers was offset by smaller holdings of hens.

Pullets not of laying age Oct. 1 were estimated to number 78,060,000—8% less than a year earlier and 27% less than the Oct. 1 average for 1950-59. All regions were below a year earlier, except the West, which had an increase of 3%.

Estimated number of all young chickens on farms Oct. 1 was 254,680,000—an annual increase of 8%.

Oct. 1 holdings of young chickens consisted of 56% pullet layers, 31% pullets not of laying age and 13% other chickens. The breakdown a year previous was 51% pullet layers, 36% pullets not of laying age and 13% other chickens.

All pullets on farms Oct. 1 totaled 222,124,000, compared with 205,881,000 last year, and with the 1950-59 average of 258,316,000. Of pullets on hand 65% were of laying age compared with 59% of laying age a year earlier. The number of laying pullets was 19% more than last year.

Other young chickens on farms totaled 32,556,000—up 6% from last year, but 29% less than the 1950-59 Oct. 1 average.

Year old and older hens Oct. 1 totaled 150,940,000—10% less than the number on hand Oct. 1, 1960. Hen numbers were below a year earlier in all regions.

Hens and Pullets of Laying Age and Potential Layers on Farms Oct. 1

Year	North Atlantic	E. North Central	W. North Central	South Atlantic	South Central	Western	United States
Hens and Pullets of Laying Age on Farms (thousands)							
1950-59 (average)	56,863	59,714	81,644	32,307	49,080	35,906	315,514
1960	47,490	50,030	67,303	39,014	45,434	40,256	289,527
1961	46,504	47,972	66,610	41,794	49,190	42,934	295,004
Potential Layers on Farms* (thousands)							
1950-59 (average)	72,968	79,399	119,541	41,950	64,364	44,392	422,615
1960	59,851	64,433	94,624	49,160	57,615	48,612	374,295
1961	57,322	61,129	90,296	51,553	61,205	51,559	373,064

*Hens and pullets of laying age plus pullets not of laying age.

Turkey Prices Firm; Broilers Level Off; Some Egg Tags Up

At week's end, broiler, turkey and egg prices and marketings were found in these positions:

Broilers: Improved demand showed up as broiler prices to the grower throughout the southern growing area leveled off at mostly 10¢ lb. North Carolina and Mississippi prices declined 1¢ during the Oct. 4-11 reporting period to meet the Georgia-Alabama level established the week before, the U.S. Department of Agriculture reported.

In Delmarva, broiler prices averaged approximately 1¢ higher Oct. 11 than a week earlier, with most sales ranging between 13.3 and 13.8¢.

Turkeys: It is evident that most growers prefer to store their birds than sell them at current levels. Some believe prices will be 5¢ lb. higher by Thanksgiving. But a shortage of storage space may eventually force them to sell before ready.

USDA says custom processing continues and exemplifies the feeling of many growers. However, this is being discouraged by many processors and in some instances by creditors.

During the week ended Oct. 12, marketing of frozen ready-to-cook turkeys improved, but lacked aggressiveness needed to stimulate active buying.

Prices to growers became generally

(Turn to PRICES, page 105)

MANEY BROS.
MILL & ELEV. CO.
Minneapolis, Minnesota
Distributors in the Upper Midwest States for
SMALL'S DEHYDRATED ALFALFA MEAL

"Give the third degree"

Contrary to common usage, this expression originally had nothing to do with police methods of obtaining confessions or information from criminals. The "third degree" originally applied to the final stage of proficiency demanded of those who sought to become master Masons. Before the candidate was qualified to receive the "third degree," he had to undergo elaborate tests of his knowledge and ability.

Feed buyers are cordially invited to subject Small's Dehydrated Alfalfa to the "third degree". As the leader in the dehydrated Alfalfa Industry, Small's operates the most modern facilities for harvesting, processing, testing, storing, and shipping. In your laboratory, test samples from any lot of Small's Dehydrated Alfalfa, and see for yourself how it measures up to—or exceeds—specifications, how well it lives up to the certificate of analysis that accompanies each order. The "third degree" will show you why Small's is the first choice of discriminating feed buyers.

ARCHER-DANIELS-MIDLAND CO.

ALFALFA DIVISION

Box 356 Kansas City, Mo.

FOR FEEDS WITH A FUTURE

Small's dehydrated alfalfa

Vitamin A Seminar a Feature of National Feed Ingredients Event

By DR. T. W. PERRY
Purdue University

DELAVAN, WIS. — One of the highlights of the recent annual meeting of the National Feed Ingredients Assn. held here was the seminar on vitamin A.

Although vitamin A was the first vitamin to be discovered, recently renewed interest has been shown in vitamin A, especially in the field of beef cattle feeding.

The program devoted to vitamin A was conducted in the form of a panel which was moderated by William L. Brickson, Specifide, Inc., Indianapolis. Each of the panel members presented a short discussion on the subject of vitamin A. Following the individual talks, questions were directed to the panel members for discussion. In addition to Mr. Brickson, the following persons appeared on the panel: Dr. T. W. Perry, Purdue University, Lafayette, Ind.; Dr. D. B. Parrish, Kansas State University, Manhattan, Kansas; Robert Wornick, Chas. Pfizer & Co., Inc., Terre Haute, Ind.; F. Howard Tinkler, Distillation Products, Inc., Rochester, N. Y., and Charles Ely, Nopco Chemical Co., Harrisburg, N.J.

Perhaps one of the most enlightening aspects of vitamin A discussions was the question and answer session following the formal talks. Therefore, a portion of the questions asked plus the consensus answers are presented. However, many questions were presented for which there are no known answers today.

(A) PHYSIOLOGY

(1) Is vitamin A associated with normal reproductive performance of the ruminant? Of the monogastric?

Vitamin A is concerned with the maintenance of epithelial tissue. We find epithelial tissue covering the outside of the body. Also it lines such parts of the body as the reproductive tract. In vitamin A deficiency, the functioning of the reproductive tracts are impaired, and, thus, reproduction can be affected adversely in a vitamin A deficiency.

(2) Is there any indication of an interrelationship between vitamin A and vitamin D and E in growth promotion, improving feed efficiency or increasing disease or stress resistance in drylot for full feed beef cattle?

Vitamins A and E are interrelated, apparently. Although the physiological action is not clearly defined, one example of an interrelationship is that in vitamin E deficiency, there is little or no vitamin A storage in the liver. However, when we get over into the broader aspects of growth promotion, feed efficiency and disease resistance, too many other factors are involved. Vitamin A is otherwise called the "anti-infections" vitamin. Therefore in a vitamin A deficiency, animals appear to be more susceptible to infections.

(3) Are there any current data showing a synergism between vitamin A and antibiotics? Also, does a vitamin A deficiency affect the action of antibiotics?

Purdue research with beef cattle indicated antibiotics in the absence of vitamin A actually depressed rate of gain, but that in the presence of vitamin A, antibiotic supplementation increased rate of gain. Since antibiotics have been shown to be a growth stimulator, it could be hypothesized that a growth stimulating product was deleterious when the animal does not have materials necessary for increased gain, such as vitamin A.

(B) CAROTENE

(1) Discuss the various forms of carotene in plants and their biological activity. Do these occur as mixtures or are they found in different plants?

There are several types of carotene in plants. The most common type and the most biologically active form is beta carotere. The carotenes can occur as mixtures.

(2) What factor should be used to convert mg. of carotene to its equivalent vitamin A potency for chicks, cattle, and swine? Would the same factor apply to dry hay, silage or corn?

An International Unit of beta carotene is 0.6 microgram of beta carotene. An I.U. unit of vitamin A is 0.25 microgram of vitamin A. However, it is not quite "Hoyle" to speak of beta carotene in vitamin A-equivalent units because animals vary in their ability to convert carotene to vitamin A.

(3) Can beta carotene from natural sources be utilized as efficiently as vitamin A as a source of vitamin A activity for both poultry and livestock?

Animals vary greatly in their ability to convert beta carotene to vitamin A. Rats convert carotene very well, but cats can not convert carotene to vitamin A. Most of the typical farm animals can convert some carotene to vitamin A. Recent research would indicate beef cattle do not do a very efficient job of converting carotene.

(4) Discuss factors that influence the conversion of carotene to vitamin A, and the storage of carotene and vitamin A.

It is believed that carotene is converted to vitamin A in the intestinal wall. Although such factors as the presence of nitrates affect the animal's ability to convert carotene, probably the most important single factor is inheritance, or specie. The same holds true for the storage of vitamin A and carotene.

(5) What is the relationship between high nitrogen fertilization of forages and the utilization of beta carotene from these forages by ruminants?

University of Illinois research results would indicate that high nitrogen fertilization will affect the level of nitrates and nitrites in feedstuffs produced. Furthermore, increased levels of nitrates and nitrites inter-

(Turn to VITAMIN A, page 110)

George Gibson Named To Honeggers' Post

FAIRBURY, Ill. — George Gibson, for the past 13 years general manager of Yieldmor Feeds, Inc., Piqua, Ohio, has been appointed eastern division manager for Honeggers' & Co., Inc., feed manufacturer of Fairbury, according to E. F. Dickey, president of the firm.

George Gibson

Mr. Dickey also announced that at least three bulk feed distributing centers are planned for Ohio at the present and these bulk distributing centers will be followed with the location of a new push-button feed mill in Ohio.

Well known throughout the feed industry nationally, Mr. Gibson has served on many committees of national, state and local trade associations. He has been chairman of the purchasing agents committee of the American Feed Manufacturers Assn.

As a public service connected with his firm's operation, Mr. Gibson has been particularly noted for his accomplishments in sponsoring a noncommercial program known as the Ohio Poultry Clinic and the Ohio Turkey Clinic in cooperation with Ohio State University and other farm leaders.

Honeggers has feed plants at Fairbury, Ill., Indianola, Iowa, Lincoln, Neb., Topeka, Kansas, and Mayfield, Ky. The firm also operates two prefabricated farm building plants and produces one of the nationally advertised laying birds, the Honegger Layer.

Mr. Gibson says that the complete Honegger operation "will bring a new and more complete program to Ohio farmers."

Mr. Gibson's address will be 4 Marymont Drive, Piqua, Ohio.

Annual Tennessee Meet

NASHVILLE, TENN. — Market agreements and orders will be among topics discussed at the Oct. 22-23 annual meeting of the Tennessee Poultry & Egg Federation in Nashville. The event will be held in the Hermitage Hotel.

PLAN AFMA CONFERENCE—The 1961-62 public relations committee of American Feed Manufacturers Assn. held its first meeting in Minneapolis recently to make final plans for the AFMA Public Relations Conference Oct. 18 in Chicago and the premiere of the new feed industry story, "Mightier Than Missiles." Around the table, left to right in the photo above are: W. E. Glennon, AFMA, Chicago; W. T. Diamond, AFMA, Chicago; Dr. J. L. Krider, Central Soya, Ft. Wayne, Ind.; Ron Kennedy, vice president, personnel and public relations, F. H. Peavey & Co., Minneapolis; Ernest J. Neill, product information, Merck Chemical Div., Rahway, N.J. (vice-chairman); John L. Schlick, director of public relations, Murphy Products Co., Burlington, Wis. (chairman); Charles E. Hughes, livestock bureau, Armour & Co., Chicago; Jack Bergstrom, director of public relations, Walnut Grove Products Co., Atlantic, Iowa; R. L. Kathe, AFMA director of public relations, Chicago; James G. Bennett, Jr., public relations dept., The Pillsbury Co., Minneapolis; William R. Pearce, assistant vice president, public relations, Cargill, Inc., Minneapolis, and Bayne Freeland, director of public relations, the Quaker Oats Co., Chicago.

Broiler Chick Placements Drop To Year-Ago Level

SALISBURY, MD.—Broiler chick placements on farms have finally fallen to a point where the number is the same as the corresponding week of last year.

Throughout the year placements have greatly exceeded last year's figures. Placements in the 22 important broiler producing states totaled 28,548,000 last week. This was 4% below the previous week and about the same as the corresponding week a year ago. Decreases were reported for 14 states compared with the previous week. The states for which sizeable decreases were reported include Georgia, Maryland, Mississippi, Texas and Missouri.

Hatcherymen in the 22 reporting states set 38,678,000 eggs last week, 3% above the previous week but 6% below the corresponding week a year ago. Settings were up from the previous week in 17 of the 22 reporting states. States for which sizeable increases were reported were Maine, Delaware, Mississippi, Georgia and Maryland.

Delmarva has just come through its worst month in the history of the broiler industry. Broilers sold during September averaged 13¢, the lowest monthly average on record. Prices were 20% below the corresponding week of 1960. Chicks started in Delmarva during September were down 4% in number while the rest of the nation had a 4% increase.

Broiler prices in Delmarva fell last week to 12.61¢, compared to 14.33¢ the week before. A year ago the price was 15.87¢.

New Yeast-Whey Product Announced

PASADENA, CAL. — Development of a new protein concentrate that "combines the finest nutrients of whey and yeast into a single, convenient high protein feed ingredient" has been announced by the Knudsen Creamery Co. of California.

H. V. Nootbaar & Co. of Pasadena and Palo Alto has been appointed exclusive distributor of the product, called "Wheast".

The announcement said the new product is being used in turkey and chicken feeds, mink rations, fish and pet foods and in special feeds for convalescing animals, particularly beef and dairy cattle.

According to Knudsen Creamery, "Wheast is produced by a controlled fermentation of specially selected dairy yeast in fresh cottage cheese whey. During fermentation the yeast consumes all of the lactose of the whey. Sugar is thus transformed into high quality protein. In the process many natural vitamins and unknown growth factors develop.

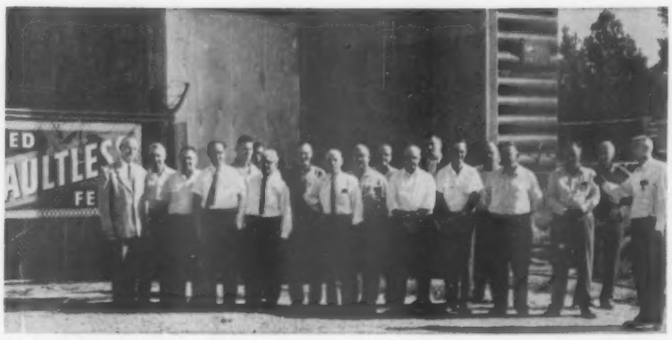
"The new product contains 52 to 55% protein. The yeast portion is amplified by milk albumen and other milk proteins and nutrients which are separated from the cottage cheese whey and dried. Thus a combination of proteins and whey factors is brought together into a single product . . .

"A nationally recognized research farm observed superior growth and feed conversion of turkey poults fed a ration containing Wheast at a level of 40 lb. per ton in comparison with poults on a ration containing 50 lb. of other yeast products and 25 lb. of dried whey."

The new product is being produced at the Knudsen plant in Visalia, Cal.

OBSERVES 40th ANNIVERSARY

CRESTON, IOWA — Nord Flour & Feed Co., Creston, has noted its 40th anniversary. Arthur J. Nord, owner and operator, started the business in 1921. Sale of feeds is the major part of the firm's operation. Mr. Nord is a dealer for Supersweet feeds.



PLANT TOUR—Illinois feed inspectors, as part of a training course, toured the Faultless Milling Co. feed plant in Springfield, Ill., as illustrated here. Emmet Johnson (right), director of nutrition for Faultless Milling, is pointing out a feature of the plant operation during the "quality control mass inspection." Left to right are Merrill Emerick, assistant superintendent of the Illinois division of feeds, fertilizers and standards; David Cox, Myron Redfern, Robert Haley, Glen Whitehurst, William Hamline, Dale Dancer, Doren Bricker, Gilbert Young Parker, Everett Walters, John Staley, Emmett Scoggins, Robert Slagle, Orville Stout, Leonard O'Brien, Floyd Dean, Arlie Moore, G. Ray Nichols and Mr. Johnson.

New Illinois Feed Regulations Set

SPRINGFIELD, ILL.—New Illinois feed rules and regulations were discussed at a public hearing here for the industry and agriculture department officials.

Passage of the new Illinois Commercial Feed Act, effective Jan. 1, 1962, sets up a new division in the State Department of Agriculture to control commercial feed. Formerly this was under the division of foods and dairies.

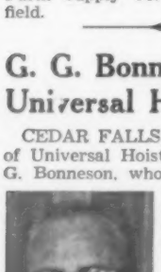
A new inspection staff will enforce the act. Superintendent of the division of feeds, fertilizers and standards is Hubert L. Goforth, and assistant superintendent is Merrill Emerick.

In essence, the new bill and regulations follow the uniform state feed bill. Changes in registration procedure eliminate the dual basis of registration and now require a $5 per brand annual registration fee and a 10¢ per ton inspection fee paid on a semi-annual basis.

A full week training course on feeds and fertilizers for the inspectors included thorough mill tours of Faultless Milling Co. and Illinois Farm Supply Co. plants in Springfield.

G. G. Bonneson Buys Universal Hoist Co.

CEDAR FALLS, IOWA—Purchase of Universal Hoist Co. here by Gail G. Bonneson, who has been serving the firm as acting general manager, has been announced.



Gail G. Bonneson

Mr. Bonneson, a certified public accountant, has been with Universal four years as comptroller and more recently in the acting general manager position.

Universal Hoist was founded in 1906 by John Voorhees, and management of the company had been in the Voorhees family until the sale to Mr. Bonneson, the announcement stated.

In announcing the purchase, Mr. Bonneson said, "More aggressive steps will be taken immediately to insure customer satisfaction through distributor education, factory field service and improved quality control. Product research and development will be strengthened in order to produce a broader line of equipment and maintain Universal Hoist's position as a leader in the material handling equipment industry."

Pfizer to Construct Minnesota Veterinary Diagnostic Laboratory

NEW YORK—Chas. Pfizer & Co., Inc., New York, will construct a modern poultry diagnostic laboratory at Willmar, Minn., to be operated free of charge as an aid to Minnesota turkey, chicken and egg producers.

The new facility will be located south of Willmar on U.S. Highway 71, in the heart of the largest turkey growing area in Minnesota—Kandiyohi county. Turkey growers in this county market nearly 2½ million birds a year.

J. J. Thompson, Pfizer president and general manager of the firm's agricultural division, said plans call for the laboratory to be completed and ready for use by early 1962.

The new Pfizer facility, under the supervision of an experienced veterinarian, will offer free-of-charge diagnostic service to poultry and egg producers.

Mr. Thompson stated the laboratory would also be equipped, on a small scale, to handle diagnostic problems of livestock producers. In such free-of-charge diagnostic work with larger animals, the Pfizer veterinary director will coordinate the activities of his facility with those of local veterinarians who seek diagnostic aid for livestock producers in their areas.

In all cases where birds are di-

(Turn to PFIZER, page 110)

Virginia Poultry Group Sets Meeting

RICHMOND, VA.—Virginia's competitive position in the poultry industry, as it relates to other states, will be a major topic for discussion as the 31st annual convention of the Virginia State Poultry Federation is held here Oct. 24-25.

An analysis of what the state has to offer, and what poultrymen must do to compete with other areas, will be presented by Dr. W. R. Luckham and Dr. C. E. Howes, Virginia Polytechnic Institute, according to the program announcement.

National Renderers Assn. Sets Meeting

NEW YORK—The Waldorf-Astoria Hotel here will be the site of the annual convention of the National Renderers Assn., Inc., Nov. 5-8.

One of the features of the program announced by the association will be a discussion session Nov. 7 when 10 tables will be set up for discussion of different phases of rendering. These tables, to be known as "trading posts," will be presided over by a member of the association as moderator, and there will be a guest expert on a specific subject assigned to each table. The association says that persons may travel from "trading post" to "trading post" exchanging ideas.

Keynote speaker for the morning session Nov. 7 will be Carleton Astell, manager, Tallow and Grease Dept., Frank Fehr & Co., Ltd., London.

Among the speakers on the program Nov. 8 will be E. Scott Pattison, manager, Fatty Acid Producers Council, and George F. Sachsel, chief, Chemical Process Development, Battelle Memorial Institute.

A post convention cruise to Nassau is slated for Nov. 11-18.

Location of Tennessee Convention Changed

MEMPHIS — A change has been announced in the location of the Tennessee Feed Manufacturers Assn. convention, to be held Nov. 17-18. As listed in this week's Convention Calendar in Feedstuffs, the meeting had been scheduled for the Chisca Downtown Motel in Memphis. However, it is now planned to have the convention at the Holiday Inn of America, 980 S. 3rd, Memphis.

Good Response to Poultry Problems Task-Force Invites

CINCINNATI—All but two associations invited last week to a national task-force meeting on poultry industry stabilization have indicated they will send delegates, and the two who have not responded are awaiting decisions by their boards. The meeting is set for Oct. 24-25 in Cincinnati.

The task-force is to be exploratory in nature. It will review the pros and cons of various procedures the industry has available to it or might adopt.

To be considered are possible legislative programs that Congress may consider in January, avenues open to industry under current legislation, tax procedures, wage and hour legislation, merchandising and promotion, new markets abroad and the effects of other farm legislation on the poultry industry.

The associations calling the session have emphasized that there will be no voting on specific issues. Each group represented will report back to its own organization.

Arrangments for the two-day session are being made by the American Poultry & Hatchery Federation, Institute of American Poultry Industries, National Poultry, Butter & Egg Assn. and the National Turkey Federation.

Invitations were sent by these four groups to the following national and regional organizations: American Feed Manufacturers Assn.; Delmarva Poultry Industries, Inc.; National Broiler Council; National Egg Council; North Central States Institute; Northeastern Poultry Producers Council; Pacific States Dairy & Poultry Assn.; Poultry Breeders of America; Poultry & Egg National Board; Southeastern Poultry & Egg Assn. and Southwestern Poultry & Egg Assn. The meeting is not open to others.

William Sargent Dies

DES MOINES, IOWA—William I. Sargent, 80, Des Moines, a pioneer in the feed industry, died recently. He had been in failing health since his retirement five years ago.

Mr. Sargent was vice president and chairman of the board of Sargent & Co., Des Moines, manufacturer of livestock and poultry feeds, when the firm was sold in 1956. He had also been president of VyLactos Laboratories, Inc., Des Moines.

CENTRAL SOYA SALESMEN HONORED—Ten Master Mix salesmen were honored for their accomplishments during the past year at the 27th annual sales convention of Central Soya's McMillen feed division at Highland Park, Ill. Dale W. McMillen, founder of Central Soya, presented the awards. Named to the company's "Wildcat Club" were nine men shown in the first photo above. They are: Back row, left to right, Harry E. Roth, Saginaw, Mich.; Edward White, Camp Hill, Pa.; Mr. McMillen; Arthur D. Leasure, Galesburg, Ill.; Edmond O. Wright, Rosendale, Wis., and James L. Bradley, Bowling Green, Ky. Front row, left to right, George Martin, Jr., Mt. Horeb, Wis.; Andrew J. Roberts, Jr., Galion, Ohio; Harold O. Fillmore, DeKalb, Ill., and Rodney D. Payne, Carlyle, Ill.

In the photo at the right, David J. Conway, left, St. Louis, Mo., received the Dale W. McMillen "Man of the Year" award from Mr. McMillen. Mr. Conway was cited by Mr. McMillen for his "ability, inquiring mind, character, humility and dedication." Mr. Conway is marine superintendent for Central Soya's A & D Barge Lines.

Operation of Two Soy Plants Changes

MINNEAPOLIS — Arrangements for operation of two of the three Spencer Kellogg & Sons, Inc., soybean crushing plants put up for sale recently were announced here this week.

Archer-Daniels-Midland Co. announced that it has leased the plant located in Decatur, Ill., which it was announced last week had been sold to Interoceanic Industries, Inc., Minneapolis (Feedstuffs, Oct. 7, page 8). ADM says that a long term lease will become effective Nov. 1.

Cargill, Inc., has announced that it will begin operation of the Des Moines plant Oct. 17. A Cargill spokesman said that the firm is not yet ready to say whether the plant will be purchased or whether it will be operated under a lease arrangement.

The Decatur plant, which has been leased by ADM, was purchased by Interoceanic Industries, Minneapolis, from Textron, Inc., which obtained the plant in July when Spencer Kellog merged with the diversified industrial firm.

Chairman of the board of Interoceanic Industries is Dwayne O. Andreas, Minneapolis, formerly chairman of the board of Honeymead Products Co., Mankato, Minn., and now an executive at Farmers Union Grain Terminal Assn. (GTA), St. Paul, the firm which purchased Honeymead. President of Interoceanic is Lowell Andreas, Mankato, Minn., formerly president of Honeymead Products, and now manager of the facility for GTA.

There has been no announcement regarding the third of the Spencer Kellogg plants, at Bellevue, Ohio.

Two-Millionth Ton for Illinois Feed Company

BLOOMINGTON, ILL.—The feed mills of Illinois Farm Supply Co., farmer owned affiliate of the Illinois Agricultural Assn., manufactured their two-millionth ton of feed Oct. 2. The production mark came near the end of the 25th year of feed distribution to Illinois farmers.

When Illinois Farm Supply Co. began distribution in 1937, it purchased most feed from the Farm Bureau Milling Co., Hammond, Ind. The cooperative maintained ownership interests in this firm until 1946, when it purchased its own milling facility.

The company now manufactures FS feeds at modern mills in Springfield and Mendota, Ill. Feeds are manufactured on order as requests are placed by the 78 member feed companies in the state, and are then distributed by these companies to farmers.

USDA Places 'Success' Tag on Grain Program

WASHINGTON—There has been more than a little disagreement on the "success" of the 1961 feed grain program, but the U.S. Department of Agriculture is doing some horn-tooting on the program.

In a news release this week, USDA quotes Charles S. Murphy, acting secretary of agriculture, as saying that the October crop report "has nailed a success sign on the 1961 feed grain program."

"It is now clear," he said, "that feed grain consumption during the coming year will exceed 1961 production, reversing a long time trend."

He put the cost of the new program "considerably below the savings which will result for taxpayers."

Mr. Murphy said the Oct. 10 crop report shows 1961 feed grain production at 4,088 million bushels, and he said that without the program, the total output would have been 4,900 million bushels.

The USDA release claimed a "sharp rise" in farm income as a result of a feed grain production adjustment and other support actions as in soybeans; "supply and price stability" for buyers of feed grains and consumers of animal products; an "impressive start" in reducing government grain stocks, with reduced handling costs.

Expansion Planned

WALLA WALLA, WASH.—Western Farmers Assn., Seattle, has purchased 22.7 acres of land one mile from here as site of new facilities, according to Henry J. Hansen, Puyallup, chairman of the board.

Planned for construction is a branch building to provide space for headquarters operation, distribution of supplies and other services incidental to membership in the cooperative. Construction will start soon on the site, which is south of the new Milton-Freewater highway, according to Mr. Hansen.

Future plans call for building of a custom feed mill in which locally-produced grains and concentrates will be used in the manufacture of custom formula feeds for cattle, hogs and turkeys; and, for still later construction, a dry and liquid fertilizer plant to do dry mixing and liquid blending to specifications of farmers.

Mr. Hansen said the move will provide the opportunity to locate a subbranch in the Waitsburg district for service to participating members in the Prescott, Waitsburg and Dayton areas.

TWO-MILLIONTH TON—The "two-millionth ton" of FS formula feed was produced Oct. 2, 1961, at Illinois Farm Supply Co.'s Mendota feed mill. Pictured above, with one of the bags of feed from this two-millionth ton are, left to right; William Cole, manager, feed division; E. V. Stevenson, assistant general manager; Chet Berg, manager, plant operations; and C. H. Becker, general manager of Illinois Farm Supply Co.

TEXAS CONFERENCE SPEAKERS—Topics pertaining to the beef cattle industry and animal nutrition were discussed at the Texas Nutrition Conference last week by (from left): Dr. Donald Dowden, Commercial Solvents Corp., New York; Dr. W. M. Beeson, Purdue University; Lloyd Bergsma, director, Texas & Southwestern Cattle Raisers Assn., Ft. Worth, and William C. Ellis, Texas A&M College.

Honor Top Salesmen At Illinois Convention

SPRINGFIELD, ILL. — Three salesmen will be selected as outstanding in customer relations at the Illinois Feed Association and Illinois Poultry & Hatchery Federation's convention Nov. 8-9 in the Springfield Armory.

Selection will be by a secret committee which will visit the 90 or more booths on the armory floor during the first day of the convention. Plaques will be awarded the winners at the annual banquet that evening at the St. Nicholas Hotel.

Feed dealers and hatcherymen are making advance room reservations at the Hotel Leland and the St. Nicholas Hotel.

Condemnation Level On Broilers Off 20%

WASHINGTON—There was a 20% reduction in post-mortem condemnations of broilers in August this year as compared with August a year earlier, according to figures announced by the U.S. Department of Agriculture.

Condemnations of young chickens (broilers), according to the report, totaled 1.72% during August, compared with 2.14% in August, 1960. The over-all condemnation rate for August was 1.71% compared with 2.00% for August of a year earlier, the report showed. Post-mortem condemnations for the month totaled 12,727,000 lb.

Condemnations by classes are, with the 1961 percentage listed first and the 1960 percentage listed second: Mature chickens, 2.73, 2.69; fryer-roaster turkeys, 1.42, 1.15; young turkeys, 1.33, 1.23; old turkeys, 1.99, 2.56, and ducks, 2.21, 1.69.

Ante-mortem condemnations totaled 1,960,000 lb. live weight for all classes.

Airsacculitis again proved to be the most common cause for post-mortem condemnation, according to the USDA report. The four most common causes and the number of condemnations caused by each follow: Airsacculitis, 1,122,165; septicemia, 634,861; leucosis, 186,772, and inflammatory, 140,835.

Among the regions of the country, the East North Central had the lowest post-mortem condemnation percentage, 1.01. The West had the highest percentage with 2.25.

Among the states, Iowa had the lowest condemnation rate .36%, and California the highest, 2.81%.

CONSTRUCTS COLONY HOUSES

FALFURRIAS, TEXAS — Clyde Burdett, Falfurrias feed dealer, is constructing two colony type houses to hold 10,000 hens each in an expansion of his poultry business, which, he estimates, will save as much as $5,000 a year over the conventional caged laying house. The houses will be 382 feet long and colonies will be six by eight feet, each holding 55 hens. An automatic belt system will speed egg gathering in the houses.

Congressman Finds Most Poultry Leaders Against Controls

LITTLE ROCK, ARK.—Rep. Dale Alford (D., Ark.), who presided over the House Select Committee on Small Business poultry hearing at Neosho, Mo., last week, said he has found that most poultry leaders prefer self-policing of the industry rather than government controls.

Rep. Alford said that, whereas the present policy of the national administration is to place controls in over-production cases, he has talked with very few poultry industry leaders who desire controls. Poultrymen hope that the application of a self-governing plan will eliminate any need for controls.

The congressman also said he has asked the U.S. Department of Agriculture to make processed and frozen broilers a regular part of the nation's school lunch program.

This would be one method of helping in the solution of the over production problem and consequent low prices, he explained. Indications are that if broilers are placed as a continual part of the lunch program, 6 million pounds of poultry can be utilized every week, Mr. Alford said.

During the two days of the initial hearing, Rep. Alford's committee listened to testimony of poultry producers, feed manufacturers and feed retailers. A second hearing is planned later in October in Indianapolis, Ind.

Rep. Alford will participate in a food problem panel discussion in Chicago Oct. 18 along with Congressman James Roosevelt of California and others.

Molasses Firm to Move

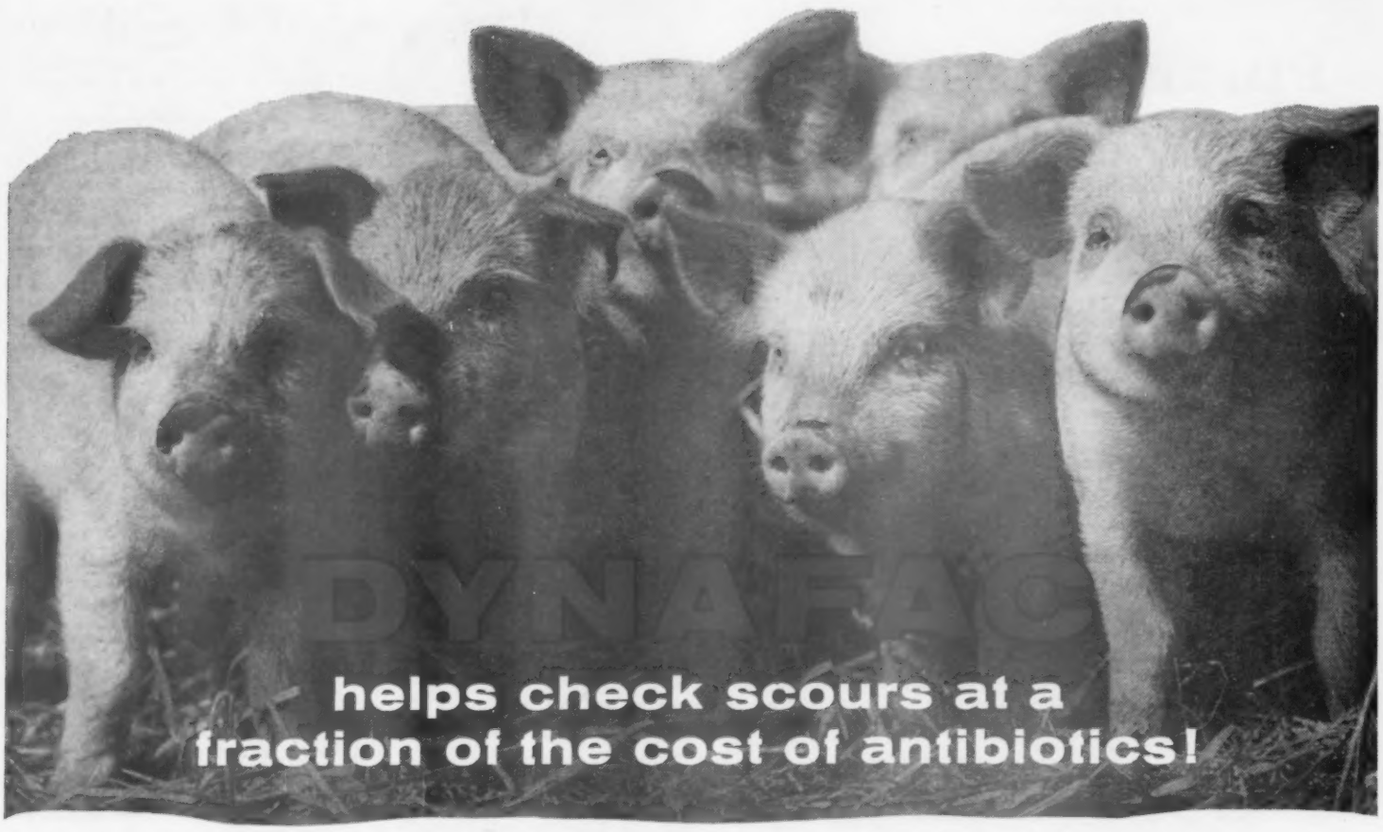
ORELAND, PA.—National Molasses Co. will move its home office from Oreland to Willow Grove, Pa., Oct. 23. The company has been engaged in the molasses business for the past 43 years. The new headquarters is near Philadelphia at the Willow Grove interchange of the Pennsylvania Turnpike.

Hog Prices Decline

CHICAGO—Oct. 12 market quotations here listed hog prices at their lowest levels in more than two months as marketings continued to rise seasonally. The peak in marketings is expected to be reached in November. The Oct. 12 top for barrows and gilts at Chicago was $18.10.

CORRECTION

An error appears in the article entitled "Developments in Swine Production Told to Feed Men at Iowa Feed Conference" (Feedstuffs, Oct. 7, beginning page 6). In the section on a talk by Dr. E. R. Peo, University of Nebraska, on nutrition and management of SPF swine (page 106, third column, line eight), the text should read "400.00 I.U. vitamin D per pound" rather than vitamin A.



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says WILLIAM SCHERF
"I marketed 1,100 hogs at 5½ months last year. I feed a pig starter with DYNAFAC and finish my hogs out on a concentrate containing DYNAFAC. I have never had a healthier bunch of hogs . . . no scours."

says GEORGE HUFFEY
"Scours is a big problem, especially when pigs are real small and weak . . . means big losses. Using pig starter with DYNAFAC on our place, we haven't been bothered with scours."

says RAYMOND BUNKER
"When scours strikes, you can lose a few before it gets straightened up . . . and there go your profits for the litter! I am sure glad my feed company started putting DYNAFAC in their pig starter . . . I have not had any scours trouble since."

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Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

Amino Acids in Soybean Hulls and Oil Meal Fractions

● J. J. Rackis, R. L. Anderson, H. A. Sasame, A. K. Smith and C. H. Van Etten, Northern Regional Research Laboratory, Peoria, Ill., Journal of Agriculture and Food Chemistry, Vol. 9, No. 5, pp. 409-412, September-October, 1961.

ABSTRACT AND COMMENT

Considerable interest is presently being shown in the use of soybean hulls and specially processed soybean "bran" flakes in ruminant diets. Also, these ingredients are being used in certain poultry rations (i.e., restricted pullet growers), and it is necessary to have an idea of the amino acid composition of the products. This paper gives us some idea as to the amino acid composition of soybean hulls. However, it should be pointed out that the experimental hexane extracted meal produced by this laboratory was considerably higher in protein than the meals available on the market and sold as "50%" dehulled soybean meal. The meal in this study was 61.4% total protein and was produced by cracking whole Hawkeye soybeans between corrugated rolls into six to eight parts and removing about 95% of the hulls and 50% of the hypocotyl by aspiration. It is obvious that under commercial conditions less efficient removal of hulls and hypocotyl is accomplished than was done under these laboratory conditions, as most commercial dehulled meals average approximately 51% total protein. The hulls and hypocotyl fractions were separated by hand, and comprised under the conditions 8 and 2%, respectively, of the whole bean. The seed coat contained 9.56% total protein and the hypocotyl contained 49.4% total protein. Most commercial samples of soybean millfeed and soybran flakes average approximately 10% total protein, with bran flakes being slightly higher than millfeed. Thus, it is also apparent that the values for seed coat or "hulls" as reported in this paper are not directly applicable to commercially available products without some slight adjustments. Nevertheless, they are among the first such values to be reported and are much more useful than mere "guesstimates."

The amino acid values as reported in terms of grams/16 gm. nitrogen are as follows:

	Whole meal	Hulls
Arginine	8.42 ± 0.00	4.38 ± 0.12
Histidine	2.55 ± 0.05	2.54 ± 0.11
Lysine	6.86 ± 0.10	7.13 ± 0.17
Tyrosine	3.90 ± 0.44	4.66 ± 0.40
Tryptophan	1.28 ± 0.05	
Phenylalanine	5.01 ± 0.35	3.21 ± 0.11
Cystine	1.58 ± 0.03	1.66 ± 0.10
Methionine	1.56 ± 0.08	0.82 ± 0.04
Serine	5.57*	7.02*
Threonine	4.32 ± 0.43	3.66*
Leucine	7.72 ± 0.32	5.93 ± 0.25
Isoleucine	5.10 ± 0.22	3.80 ± 0.08
Valine	5.38 ± 0.07	4.55 ± 0.00
Glutamic acid	21.00*	8.66 ± 0.22
Aspartic acid	12.01 ± 0.25	10.05*
Glycine	4.52 ± 0.38	11.05 ± 0.73
Alanine	4.51 ± 0.31	3.98 ± 0.13
Proline	6.28 ± 0.54	5.76*
Hydroxyproline	0	7.57*
Ammonia	2.05*	1.55*

*Value obtained by extrapolation to zero-hydrolysis time, other values for 24 hours and 72 hours.

To convert from grams per 16 gm. of nitrogen to the percentage amino acid content:

$$\text{gm. of amino acid per 16 gm. N} \times \frac{\text{\% nitrogen of feed (gm.)}}{16} = \text{\% amino acid content of feed (in gm.)}$$

◆

Timely and Worth Noting

Regulation of heat periods in commercial beef herds has much to offer the commercial cattleman, especially those operating under range conditions, where close calving dates permit much better management of both calves and cows. A recent report from Cornell University shows that we are near a successful solution to the problem. Other work at various stations is also underway in this field and results will appear during the next few months.

The Cornell group (Hansel, Malven and Black, J. An. Sc. 20, 3, 621, August, 1961) showed that it was possible to bring 26 out of 27 Hereford heifers into estrus and artificially inseminate them within an eight-day period by altering the naturally occurring cycles, where necessary, by means of oxytocin injections or by a combined oxytocin - progesterone treatment. The major cause of the relatively long period (eight days) was the relatively long interval (6 to 8 days) which was required between cessation of the treatment and expression of estrus on the oxytocin-progesterone treated group, which resulted in 14 of the test animals showing estrus on the sixth day. However, 50% of the 26 heifers conceived to first service. Although methods such as this, or similar ones, offer a means of synchronization of estrus, they demand close scrutiny, good means of restraint for injection of hormones, and are not well adapted to many practical conditions.

A much more practical method involves the feeding of the compound 6 - methyl - 17 - acetoxyprogesterone (Provera, Upjohn Co., Kalamazoo, Mich.) in soybean meal once daily for 20 days. During the first 10 days of the feeding period, 4 lb. of soybean meal containing 968 mg. of the compound are used, while for the last 10 days, 500 mg. of the compound are contained in 4 lb. of soybean meal fed daily to each animal. None of the 32 Hereford cows so fed came into estrus during the feeding period. Half of these cows came into estrus and were inseminated three to four days

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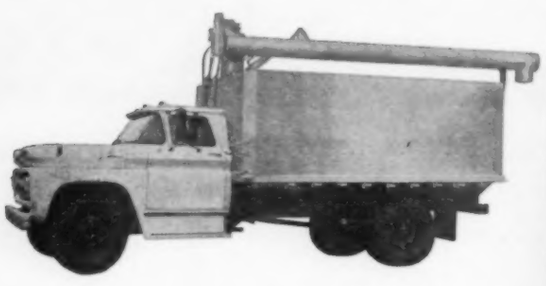

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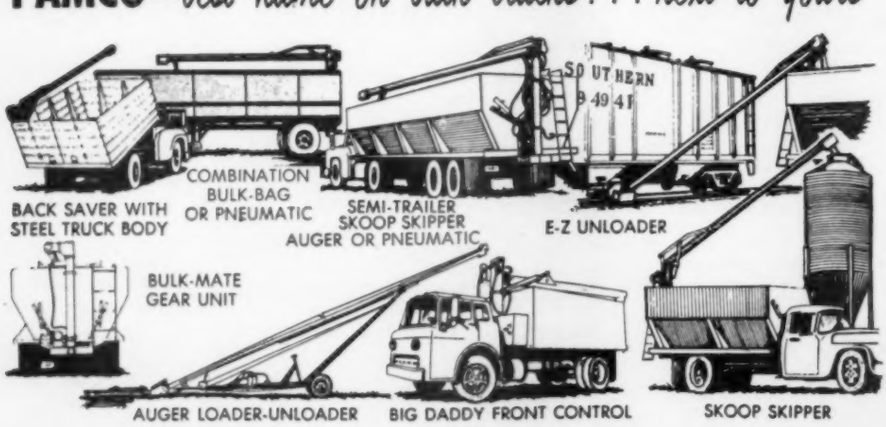

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ATHENS, GA.—One of the Peck's Bad Boys of the feed business as customers go is the fellow who calls the mill at 5 p.m. and orders a batch of special mixed feed, causing the mill to drop everything at the close of a shift to produce it.

He is scheduled to come by the next morning to pick it up or have it delivered first thing in the day's order of business.

Then, the telephone rings, right after the office has opened, and he announces he has changed his mind overnight and doesn't want the special batch.

This Peck's Bad Boy was described during a session on management at the Southeastern Feed Production School.

"What do you do about him?" asked instructor Wendell Mann, Central Soya.

The answer came from the audience: "He'll make the rounds!"

after cessation of the feeding of the material. An additional 13 cows ovulated without showing signs of estrus and all cows were inseminated, and 25% conceived to the first service. Some of the cows which had "silent" ovulations were inseminated after they had ovulated. It should also be pointed out that one-half of the cows in this trial were also injected with estradiol at the time of insemination, but the conception rate was not improved by this treatment.

It should be pointed out that the fertility rate of 25% for these cows when bred at first estrus after feeding the progestational compound appears to be quite a bit lower than normally expected. Thus, more work must be done with the material before field recommendations can be made. Obviously, other levels of usage must be tested as the levels used in these trials could be either too high or too low.

Another compound tested, 17a-ethynyl-17-hydroxy-estr-5(10)-en-3-one in soybean meal did not prove to be effective in inhibiting estrus and ovulation when fed to Herefords. However, it is entirely possible that levels used were not sufficient for the purpose.

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Least Cost Broiler Production, Dangers of Government Controls Discussed at Arkansas

By THOMAS E. LETCH
Feedstuffs Staff

FAYETTEVILLE, ARK.—How to produce a pound of broiler or other finished livestock product at least cost and the dangers of government controls to the feed industry were two of the timely topics that received attention during the Arkansas Formula Feed Conference held on the campus of the University of Arkansas here Sept. 28-29.

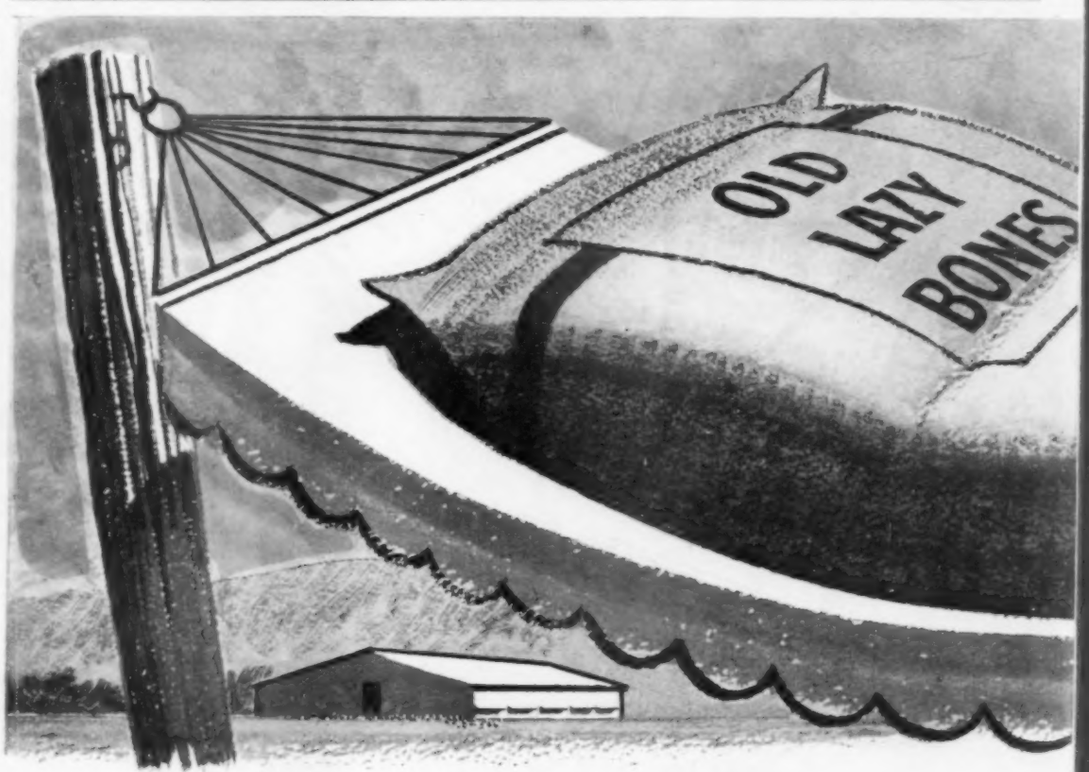
Approximately 200 persons, a record attendance for the conference, heard speakers from the university, government, industry and trade associations discuss problems that are uppermost in the minds of feed industry personnel.

Despite the disastrously low broiler and turkey prices that have prevailed for such a long time, and the expectation that there is not much hope for substantial improvement in the near future, the feed people from the state who are so heavily involved in the poultry industry did not seem gloomy. Most operators report that they have cut back their placements, but they give every indication of fully expecting to weather the storm and be in business as usual next year at this time.

The low prices have caused feed men to take another look at their formulas, though, and see where it might be possible to reduce costs. Fitting in well with this attitude was the panel discussion on least cost formulation that was the finale of the conference. Dr. H. Ernest Bechtel, Dawe's Laboratories, Inc., Chicago, was moderator. Participants were Dr. Robert Grainger, Monsanto Chemical Co., St. Louis, discussing the use of electronic computers; Dr. E. L. Stephenson, poultry rations; Dr. M. L. Ray, beef cattle; Dr. K. W. Scott, swine, and Dr. O. H. Horton, dairy cattle. Drs. Stephenson, Ray, Scott and Horton are on the Arkansas staff.

Linear Programming

"It is necessary that we continually re-examine formulas to make certain that we achieve optimum results at minimum cost to the producer," Dr. Bechtel said. He noted the development of linear programming to assist in least cost formulation. While he didn't maintain that linear programming provides the complete answer to least cost formulation, he



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pointed out that the electronic computer is a useful tool that should be used.

Dr. Stephenson noted that many Arkansas broiler producers had been asking him the question: "With broilers selling at 9½¢ lb., how can I cut my formula cost without hurting gains?"

The Arkansas poultry specialist went through the Nutrition Research Council recommendations. He said that it is wise to add certain safety margins of vitamins, and that calcium levels should probably be higher than the N.R.C. recommendations. "But beyond that, if you get a suggestion too far from the N.R.C. standards, ask to see the data to back it up," Dr. Stephenson told the feed men. He cautioned against adding many sources of unidentified growth factors ". . . the only thing you may add is cost."

Dr. Grainger said that Monsanto personnel have been working with a large computer on the least cost broiler ration, but that they don't feel it can yet provide all the answers. He pointed out the high cost of using the computer and noted that many problems can be solved by simple calculations. He stressed the importance of setting the limitations when using the computer.

"We believe the computer is especially valuable as a research and development tool," he said.

Least Cost Swine Rations

Discussing least cost rations for swine, Dr. Scott stressed that "least cost" does not necessarily mean "cheap." Per ton feed cost on the ration that produces a pound of finished meat most economically may be far from the "cheapest" ration.

"Today with our knowledge of the requirements, it is no longer necessary to have 'variety' at the expense of economy," Dr. Scott said. To evaluate this proposition, an experiment was conducted at Arkansas comparing a simple, economical ration with one containing a wide variety of ingredients.

The simple ration contained ground corn, stabilized fat, 50% soybean meal, salt, limestone, dicalcium phosphate, vitamin A, vitamin D, riboflavin, pantothenic acid, niacin, choline chloride, vitamin B_{12} and zinc. The complex ration contained ground corn, alfalfa meal, meat and bone scrap, 44% soybean meal, fish solubles, dried whey, dried beet pulp, molasses, salt (T:M), limestone, dicalcium phosphate, vitamin B_{12}, Terramycin, riboflavin, niacin, pantothenic acid, choline chloride and zinc.

"A cost analysis of these rations shows that the simple one cost $52.79 per ton contrasted with $58.02 for the complex one," Dr. Scott continued. "Using actual figures from the trial, the simple ration produced gains at $6.75 per cwt. of gain, or $10.05 feed cost for 150 lb. of gain, whereas the complex ration cost $11.22 per cwt., or $16.83 for 150 lb. of gain. This amounts to $6.78 difference per pig at market time."

Substitution of lower cost ingredients may also be possible, Dr. Scott said. "Since the advent of B_{12} supplements, the addition of animal protein is no longer necessary."

Dr. Scott reviewed the use of feed constants to evaluate various ingredients. And he noted there are many feed evaluation systems based on least cost ration ingredients.

"Any one of these methods, if judiciously followed, will probably produce a lower cost product and, hence, more profit for the producer. The main pitfall to avoid is not to look on these or like computations as final. The failure of the formulator to use judicious care can easily result in a low cost ration which is nutritionally inadequate, hence destroying the savings made possible by using low-cost ingredients."

Dairy Cattle Energy Needs

Dr. Horton called attention to the need of balancing rations for dairy cattle. "Most unbalanced rations are expensive because they reduce efficiency.

"A limited energy supply more frequently retards the growth of dairy cattle and lowers milk production than does a deficiency of any other nutrient. In practice, the tendency is to waste protein and underestimate the energy requirements."

As to how dairy rations may be made more economical, Dr. Horton said that more emphasis must be placed on the grain ration and the purchasing of grains which will supply large amounts of energy at the lowest cost.

"Substitutes such as milo, barley, oats and milled by-products may replace corn in some areas. Rice bran as a substitute for wheat bran may be a possibility based on a limited amount of work done at this station with growing dairy heifers." The feed dollar can be stretched by: (1) Feeding a cow what she needs, (2) furnishing good roughage, (3) purchasing concentrates which will furnish the needed ingredients most economically.

Dr. Ray said that ruminant nutrition is behind that for other animals, and that there are many questions unanswered as to how to achieve a least cost ration. In this connection, Dr. Bechtel predicted that "we will see great developments in ruminant nutrition within the next three years."

Government Programs

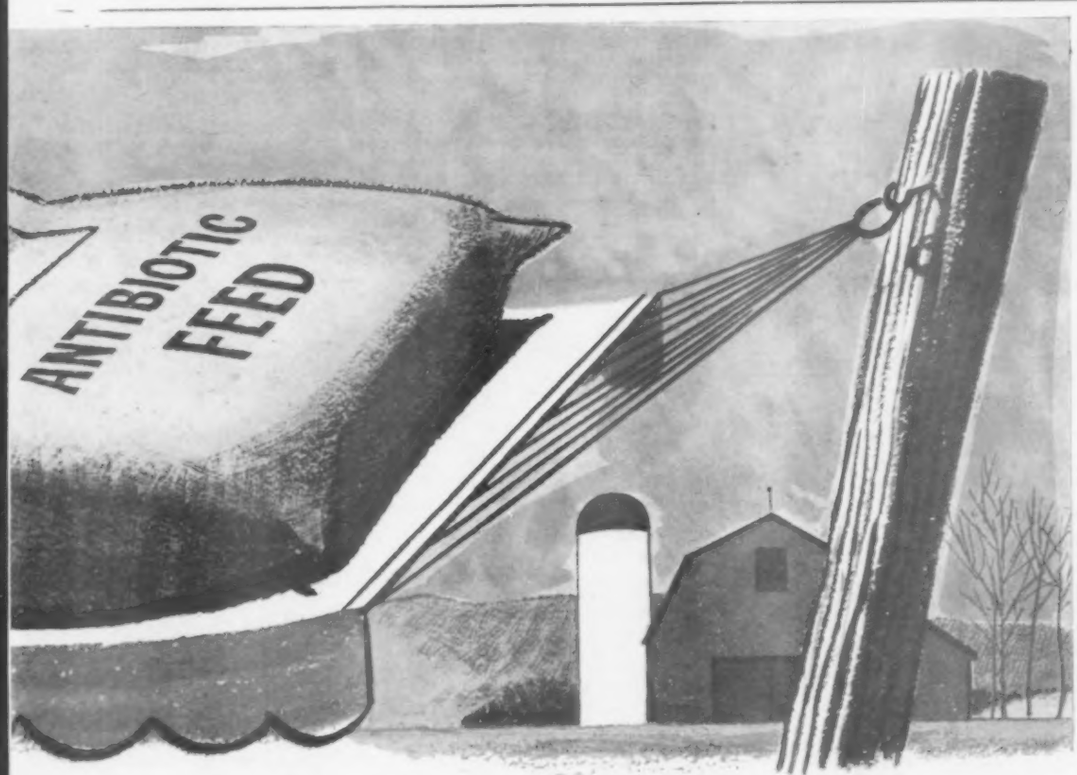
Oakley M. Ray, director of market research, American Feed Manufacturers Assn., Chicago, gave his views of the recent and possible future government agricultural programs concerning meat, milk and eggs.

"Unless the broiler industry cuts placements enough for prices to rise to profitable levels, it is my opinion that legislation for a broiler control program will be introduced early in the next session of Congress," he said.

If a broiler program takes the form of the milk marketing orders, Mr. Ray continued, one of the important effects on the feed industry would be the tendency to shift the location of mills toward areas of greatest human population.

A type of marketing order which probably is more likely to be considered for livestock and poultry products was authorized for turkey and turkey hatching eggs, Mr. Ray continued. This sets up the machinery to make an order legally possible. The orders which are authorized for turkeys and/or turkey hatching eggs might limit the number of birds each processor could slaughter and/or the number of eggs each hatchery could set. Quotas would likely be based on the recent volume of each processor and/or hatchery. The orders would not support prices directly but would attempt to accomplish this objective by controlling supply.

Whatever the form of control takes, Mr. Ray said, "the average price of the animal product would be increased. Extremely low prices such as recent broiler and turkey prices would be avoided. Supplies would be reduced to accomplish this. Consumer



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150g/T tetracycline-type plus 50g/T Baciferm	8%	11%	9%	6%	1%
100g/T tetracycline-type plus 100g/T Baciferm	10%	7%	5%	3%	2%
200g/T Baciferm	0%	0%	0%	0%	0%

*Potentiation gives average blood levels of 0.5 mcg/ml.
**No data were obtained during first week.

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AT ARKANSAS MEETING—Attending the recent Arkansas Formula Feed Conference at Fayetteville were a number of officers and board members of the Midwest Feed Manufacturers Assn. which cooperated with the university and the Arkansas Feed Manufacturers Assn. in presenting the conference. They are shown above with Dr. E. L. Stephenson, chairman of the conference. From left to right are Larry Alley, Pay Way Feed Mills, Inc., Kansas City, president of the Midwest group; Fred Darragh, Darragh Co., Little Rock, past president and board member; Ted Cameron, Cameron Feed Mills, Inc., North Little Rock, board member, and Collier Wenderoth, O.K. Feed Mills, Inc., Ft. Smith, past president, and Dr. Stephenson.

prices would be increased and less would be consumed. Quotas would likely be based on recent production and it is likely that production would tend to be frozen to its current geographical location."

Pointing to Arkansas, where the state has increased its share of the U.S. broiler market from 6% in 1940 to 10% in 1960, the AFMA speaker said that this likely would have been impossible if a control program had been initiated in 1940.

Again, controls would likely limit rapid expansion such as has occurred in recent years in the poultry meat industry. U.S. production of broilers has more than doubled since 1950. Broiler output in Arkansas has more than tripled during the past 10 years. U.S. turkey production in 1961 will be more than double 1950. A control program would almost certainly have made much of this increase impossible, Mr. Ray said, pointing out that probably a 2% rise (the same as the population) would have been authorized.

A restriction in output of animal products would, of course, cause a corresponding restriction in feed requirements. This would apply increased pressure to the feed industry which is already extremely competitive with a substantial amount of excess plant capacity. Similar pressures would be applied to other segments of the industry such as processors and hatcheries.

Continuing, Mr. Ray pointed out that "it would be difficult to operate a control program individually for broilers, hogs or beef cattle over an extended period of time without serious problems caused by inter-relationships between the three commodities. If a control program should be developed for one of the three, it probably would eventually be extended to the other two."

Another problem created by raising the prices above free market levels is in the export market. If prices are higher than world markets, either much of the export market will be lost or taxpayers must subsidize each bushel or pound that is exported. It also encourages increased production of the product abroad.

"The Kennedy administration believes that supply-management programs are the only satisfactory answer to problems in agriculture," Mr. Ray warned. "It seems that more and more of our decisions are going to be made in Washington, and the government is not overly sympathetic to agri-business people."

Control Official Speaks

Henry DeSalvo, in charge of feed control, Arkansas State Plant Board, Little Rock, complimented the feed men on the better job they are doing. Despite an increasing number of samples being analyzed, there have been fewer cases of protein levels failing to meet tag specifications and adulterations. Two years ago, he said, 7.6% of the samples were deficient. Last year it was only 5.6%.

Improper mixing continues to be a problem, however, Mr. DeSalvo noted. And, in some cases it is causing toxicity.

The feed control official called for a revision and clarification of the state feed law, particularly in standards where nutritional research has shown that protein levels in hog feed, for example, need not be at the level called for in the law.

Mr. DeSalvo reported that there were 550 feed manufacturers registered to do business in the state, with 175 of them being Arkansas manufacturers.

• • •

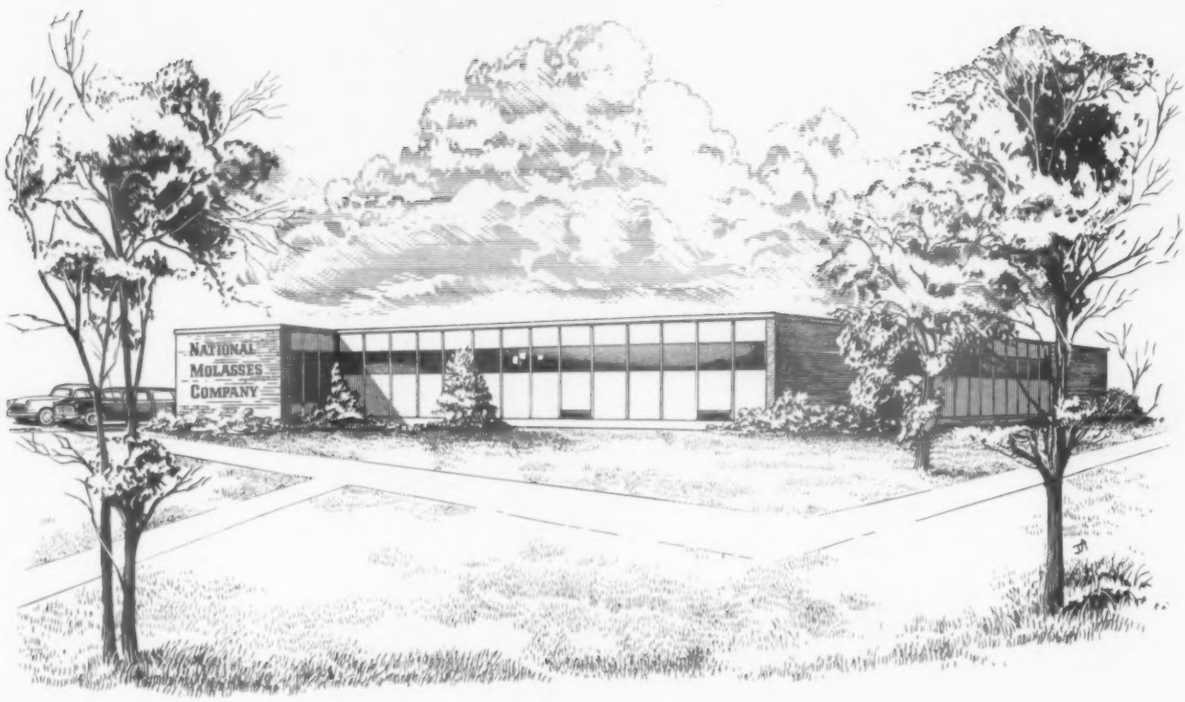
Arkansas Feed Men Elect Don Tyson

FAYETTEVILLE, ARK. — New president of the Arkansas Feed Manufacturers Assn. is Don Tyson, Tyson's Feed & Hatchery, Inc., Springdale, Ark.

He was elected during sessions of the group held here prior to the Arkansas Formula Feed Conference Sept. 28-29. He succeeds Henry H. Niemeyer, Niemeyer Grain Co., Inc., Little Rock.

Elected to the post of vice president was Pat Henry, Jeff D. Brown & Co., Inc., Springdale, succeeding Don Tyson. J. W. Cobb, Cameron Feed Mills, Inc., North Little Rock, was reelected secretary-treasurer.

ARKANSAS OFFICERS—Officers of the Arkansas Feed Manufacturers Assn., elected at a meeting just before the recent Arkansas Feed Conference held in Fayetteville, are shown above. From left to right they are: J. W. Cobb, Cameron Feed Mills, Inc., North Little Rock, reelected secretary-treasurer; Don Tyson, Tyson's Feed & Hatchery, Inc., Springdale, new president, and Pat Henry, Jeff D. Brown & Co., Inc., Springdale, new vice president.



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Managing Customers Called a Key Factor In Maintaining Feed Production Schedules

By ROBERT H. BROWN
Special Correspondent

ATHENS, GA. — Management has the task of managing customers as well as the problems of office procedure, finance, employment and office hours.

This became evident as a major portion of the management segment of the program of the Southeastern Feed Production School was devoted to a question and answer session following a talk by Wendell Mann of Central Soya.

When the matter of adhering to schedules came up, those attending the session expressed high interest in doing that, but they also expressed interest in learning how to schedule customers.

Mr. Mann said it is far better to try to adhere to some sort of a schedule than not to try at all.

The big problem, it seems, is how to go about educating customers that mills must run on schedule in order to maintain an efficient operation. To do this, one of the better ways is to first educate the company salesmen and then get them to work on the customers, said Mr. Mann. They should be trained to point out to customers as they make calls that the plant needs to know as far ahead of time as possible the requirements of the customer so that production can be put on the board. These salesmen can do a lot toward advising customers to place orders at least a day ahead of time.

Collect Calls

Another way suggested to maintain production is to have customers call the plant a day ahead of time and to call collect.

The order department of a mill can do a lot toward orderly grinding and mixing, it was pointed out. By scheduling a day ahead of time, this department usually knows when a light day is coming up and may be able to get on the telephone to call customers to see if impending orders can't be booked for those slack days.

One of the problems is the customer who comes in with a leased truck and insists upon being serviced ahead of time because the truck is costing him money. The best policy is to try to work him in some way, it was agreed.

Another vexing customer is the one who "just backs up to the dock" and demands service. This is the fellow who also has to be managed in some way.

Mr. Mann pointed out that the Chattanooga Central Soya plant makes it a policy to load customers to 6 p.m. and uses the second shift to load company trucks for delivery trips the next morning.

Another plan suggested was to convert customers to the use of hopper cars where facilities are available. It's possible to explain to customers that the cost of operating trucks, plus time and salaries for drivers, might exceed the cost of railroad hoppers. There are many advantages to using hoppers and their use is on the increase in some areas, it was reported. When it is possible to convert a "troublesome" customer to using these cars, considerable day time is saved because the hoppers can be loaded at convenient times.

Basically, the problem is entirely one of educating customers. Several other suggestions were also offered. One of the most widely used plans is to have an occasional "open house." At this time, customers are invited in to look the plant over so that they can get some idea of the problems confronting management.

Still another method, which also involves good public relations, is to invite a group of county agents to tour the mill. One North Carolina operator said this had been especially beneficial because farmers will listen to county agents when they will not pay attention to the pleadings of employees. Even tours of Boy Scouts, school children and others help in a public relations way, feed men commented.

One of the troubles of management and scheduling, said Fred Conklin, of Red Hat Feed Mills, Decatur, Ala., is that "we are trying to be all things to all people."

He indicated mills are trying to take care of the pop-in customer, the emergency customer who wants a batch of medicated feed in a hurry, the man who has neglected to check his bins and suddenly finds himself out, and the customer who orders a full day or two ahead of time.

All attending the session agreed on one thing: The customer who suddenly discovers a flock of sick chicks and wants a special feed formulated should get it, and as fast as possible.

"There have been times when we've dropped everything to get out a batch of specially medicated feed for that customer," said Mr. Mann.

QUALITY CONTROL—Quality control involves a careful control of inbound ingredients, proper use of laboratories, as well as outbound checks, it was stated.

Marv Wilkening, Alabama Flour Mills, Decatur, Ala., elaborated on this outline by suggesting that on inbound ingredients one qualified person should be made responsible for checking all incoming ingredients, especially if a company does not have a laboratory. An independent laboratory should be available for testing samples.

A set of sieves and a magnifying glass are aids in observing adulterants and reference samples taken should be retained. On bagged ingredients inbound, the sample size should be ample. A good guide figure is to take samples from at least 10% of the bags, he pointed out.

Samples taken from bulk deliveries should be not less than six cores, using a closed-end probe. Two cores should be taken from each end and two from the middle, he said.

Samples should be taken of each shipment of inbound ingredients, and comparisons should be made for apparent uniformity. Here the use of a magnifying glass is convenient, and the one man responsible for inbound ingredients should be trained to know what in the way of foreign matter to look for. Meat scraps with calcium carbonate and brought up with blood meal is one example such a man should be trained to look for, it was said.

Check on Uniformity

Samples of each batch of finished feed for comparison of uniformity are desirable. If uniformity doesn't show, the ingredients may not be uniform, he said.

If errors are found in the finished product, proper authorities should be notified and an attempt made to determine the source of error, it was stated.

Here is a check list to be used in tracing down errors: (1) Inferior ingredient, (2) plant contamination, (3) formulation error, (4) failure to batch

(Turn to KEY FACTOR, page 97)

CHAMPION

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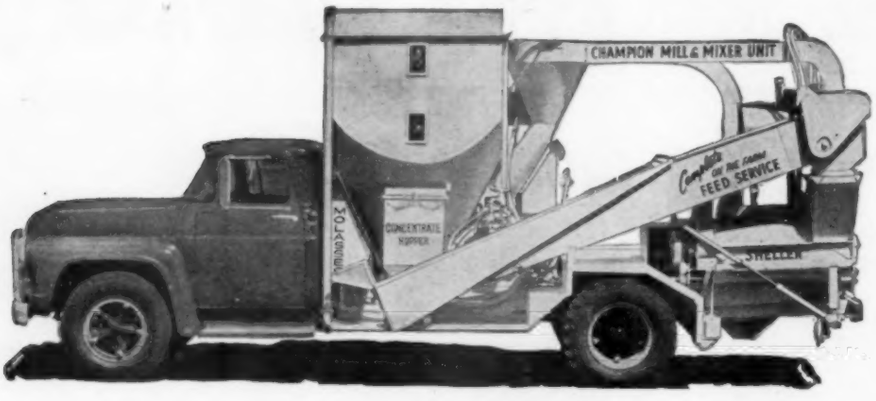

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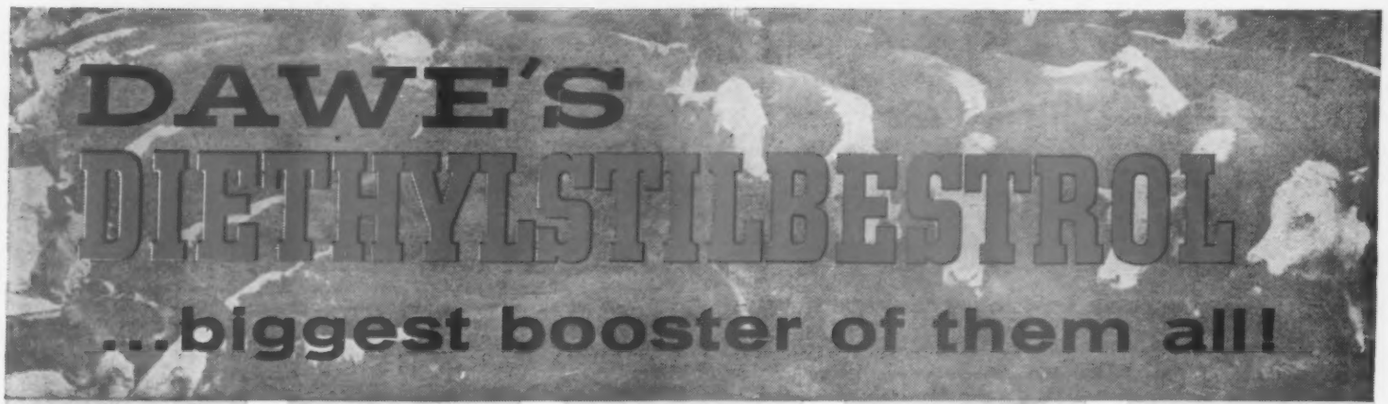

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—according to the average of diethylstilbestrol tests that have now continued for more than six years, with thousands of cattle and many different rations. Dawe's Diethylstilbestrol Premix is manufactured and sold under license granted by Iowa State University Research Foundation, Inc., under its U. S. Patent No. 2751303.

BULLETIN!

May 31, 1961—Latest diethylstilbestrol test results released today at Iowa Cattle Feeders Day show 9.1% improvement in feed conversion. Yearling steers, fed a supplement containing diethylstilbestrol in dry lot for 139 days, returned approximately *$9 more profit per animal* than those not receiving it.

Diethylstilbestrol Premix is one product in Dawe's complete line of beef cattle feed additives:

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WORLD'S OLDEST AND LARGEST SPECIALISTS IN FEED FORTIFICATION

Cornell Dedicates Building As Frank B. Morrison Hall; Nutrition Symposium Held

By Special Correspondent

ITHACA, N.Y. — A great building was dedicated recently to a great man. This often happens, but this time it was a bit unique.

Dr. F. B. Morrison

The late Prof. Frank B. Morrison, who had spent a greater share of his ever-enduring energy in the field of nutrition, had envisioned the needs and plans for a new animal husbandry building at Cornell University but probably never realized that the building would bear the name Frank B. Morrison Hall.

And, as the building was dedicated, the field of nutrition in which Prof. Morrison had spent his life was not forgotten. In conjunction with the building dedication, a nutrition symposium (summarized below) was held.

The $1½ million animal husbandry building at Cornell provides space for the staff to carry out work in three main areas—in teaching undergraduate and graduate students, in research and in extension work.

The new building covers approximately three acres. That's about 133,000 sq. ft. of floor space. It has a four-story front facing on Tower Road and a two-story wing along Judd Falls Road and tapers to a one-story structure in the rear which houses the meats division of the department.

Six classrooms are provided, including one of 300-student capacity. The building has five student-teaching laboratories including a small animal laboratory. For the first time, facilities for handling meats are consistent with both state and federal regulations, the department reports. This permits students, including veterinary students, to become familiar with all the equipment. The building also contains the latest special equipment for teaching advanced students and for research, including electronic computers, colorimeters, electronic recording instruments and radioactive isotope equipment.

Special Equipment

Special equipment is available to permit more precise and detailed measurements of animal responses. Included are: Oscilloscopes for measuring the depth of fat and/or muscles in live animals, a carbon dioxide hog immobilizer for studies in humane slaughtering, refrigerated centrifuges, a $10,000 temperature-humidity controlled smokehouse, a Warburg apparatus and freeze-drying equipment. Also included are a large animal operating room and a lead-lined X-ray room.

Facilities for extension teaching include classrooms for teaching short courses; conference rooms; a classroom with oven, stoves, and a mirror for demonstration lectures to county agents and farmers on meat cookery; and a feeding laboratory.

The building is highly specialized to serve departmental research projects for New York's dairy and livestock industries, department personnel pointed out. Included in the projects are such fields as dairy cattle, beef cattle, sheep and swine studies; animal nutrition; animal physiology; animal breeding; meat processing, and forage crop utilization. For example, basic research in artificial breeding has a high priority in the department of animal husbandry. Dr. Kenneth L. Turk, head of the department, calls artificial insemination "a classical demonstration of the practical application of fundamental research." He says that "no other practice based on research and education has ever been so widely accepted by dairy farmers. Such an increase has occurred because dairy farmers have recognzed the possibilities of this practice for extending the usefulness of outstanding sires to improve their herds."

Once a laboratory curiosity, artificial breeding has become standard operating procedure on the nation's dairy farms, and Frank B. Morrison Hall offers facilities to continue extensive research in this vital field.

Artificially sired cows in New York's Dairy Herd Improvement Assn. are producing about 300 lb. of milk more each year than their stablemates sired naturally. Dr. Turk says this has boosted New York dairy farmers' income more than $8 million a year. "For each dollar spent on research, the return has been more than $240," Dr. Turk declared. "This means research is paying off more than 240 to one." He notes also an added $11 million could be expected if the remaining cows were bred artificially to better sires, and similar responses were obtained.

Nutrition Studies

Experimentation in animal nutrition provides another example of the expanding research in animal husbandry at Cornell University. Studies are continually in progress. One such project is the three-year study by Dr. S. T. Slack and Dr. W. K. Kennedy showing that cows will produce an average of 16 extra pounds of milk daily if they're fed early-cut silage instead of late-cut, field-cured hay.

The big difference in milk production, according to Dr. Slack, is observed between the early and late-cut forages and can mean an extra $50 million a year to New York dairymen.

Prof. Frank B. Morrison (1887-1958), served as head of the animal husbandry department at Cornell from 1928 through 1945. Originally from Wisconsin, Prof. Morrison came to Cornell in 1927. He has been credited with building the department into one of the world's largest and best. During his tenure, new livestock barns were built, better livestock was purchased, graduate training programs were strengthened, high-quality young scientists were added to the staff, undergraduate courses were revitalized and extension programs were made more valuable and informative, people in the department say.

Prof. Morrison achieved a worldwide reputation as an agriculturist, scientist, teacher and administrator. He is known especially as the coauthor and author of the widely recognized book "Feeds and Feeding."

The educator and his wife endowed a graduate fellowship at Cornell, especially for foreign students but available to others, for graduate work and research in animal husbandry. They also endowed an annual award by the American Society of Animal Production to a scientist for "outstanding research in livestock production."

FRANK B. MORRISON HALL—Cornell University's new $4,500,000 animal husbandry building is shown here. It is named for the late author and professor of animal husbandry and animal nutrition at the New York State College of Agriculture, Dr. Frank B. Morrison. Dr. Morrison was head of the department from 1928 to 1945.

NUTRITION SYMPOSIUM — Five leading animal husbandry specialists highlighted the importance of research to animal husbandry and the significance of livestock to consumers at the dedication symposium of Frank B. Morrison Hall.

Dairy Cow Research

Dr. Frederick N. Andrews of Purdue University foresees current research leading to scientific control of cow's estrous cycles, alternation of sex ratios, regulation of growth patterns in terms of muscle and fat, and precise estimates of live animals' body composition.

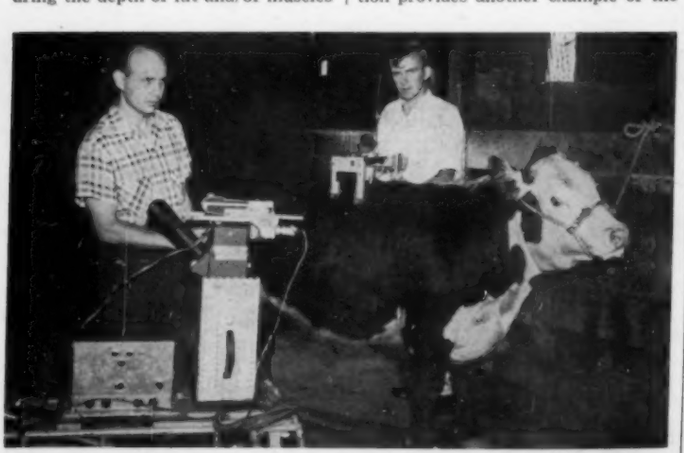
"Controlled heredity, in terms of predictable genetic alternation is still highly speculative, but there is no reason to believe we will not continue to affect animal performance by physiological and nutritional means," Dr. Andrews stated.

"The control of the climatic environment is limited chiefly by economic considerations and a need for more basic information as to the physiologic mechanisms that the climatic factors control or influence."

Purdue's dairy department head said, "The patterns of growth, reproduction, milk and egg production and, indeed, all characteristics of protoplasm are determined by the genetic makeup of the individual and its response to all of the environmental factors to which the organism is exposed. Genes are of importance only in that they govern definite chemical or physical processes.

"We may attempt to improve animals and their performance by selection (genetic means) or we may attempt to regulate performance by control of the various environmental phenomena. The science of physiology has speeded up genetic improvement by the development of artificial insemination techniques and the solution of problems in gametogenesis, the storage of sperm and ova, and fertilization and embryonic development. The stimulation of growth rate by the injection or feeding of hormonal substances is a demonstration that genetic or physiological limitations can sometimes be overcome by simple procedures. The increase in annual egg production from perhaps 15 eggs to 300 or more is evidence

FRACTION COLLECTOR — Rogers Simmons, a research assistant from Damariscotta Mills, Maine, operates a fraction collector, an automatic machine recently installed in Frank B. Morrison Hall. The collector automatically dispenses accurate and equal amounts of any chemical in a series of test tubes for laboratory and classroom use, Mr. Simmons pointed out.



SONORAY—Dr. James R. Stouffer, left, animal husbandry department, Cornell University, uses a Sonoray machine for a profile picture of the depth of fat on the steer's back. Holding the apparatus on the animal's back for the experiment is August Diekmann, post-doctoral fellow from Germany. This method of scanning and recording the depth of fat and/or muscles was developed at the New York State College of Agriculture, Cornell, Dr. Stouffer said.

KJELDAHL APPARATUS—Paul Reynolds, graduate assistant in animal nutrition, helps Sue Spitz, lab technician, operate a Kjeldahl apparatus in one of the new laboratories in the New York State College of Agriculture animal husbandry building at Cornell University. The apparatus determines the nitrogen content of feeds and waste materials, Mr. Reynolds stated.

that both genetic and environmental control can greatly improve upon the species created by nature."

Dairy Nutrition

Dr. J. K. Loosli of Cornell summarized research results showing the relationship between animals' nutrition and their lifetime production. Citing various research evidence that slower growth rates increase an animal's productive life span, Dr. Loosli suggested that scientists who retard dairy cattle growth by systematically undernourishing the creatures may lose more than they gain. "Undernourishing dairy cattle, while perhaps extending lifetime performance, delays the onset of reproduction and lactation too much to be advisable in the U.S., especially in consideration of the disease and management factors that limit productive lifespan."

Dr. L. A. Moore of the U.S. Department of Agriculture Agricultural Research Service outlined new frontiers opening up in animal nutrition research. He called for further studies in vitamin and mineral requirements, practical animal feeding experiments, more research into the effects of various feeds on animal products, and studies of animals' energy metabolism.

"In order to conduct such experiments, we must continue to have trained animal husbandmen, scientists who will be able to recognize such conditions as grass tetany, nitrate toxicity, deficiencies or other abnormal conditions," Dr. Moore said. "We must have keen observers, trained men who have an intimate knowledge of the habits and actions of farm animals in order to uncover the problems of the future."

Nutrition Research

Prof. L. A. Maynard of Cornell's school of nutrition described the historical development of research and graduate teaching in animal nutrition and livestock feeding at Cornell. The emeritus professor told how experimental work was launched at the university before 1880, with research work by leading specialists bringing the field to its present highly technical status. Prof. Maynard outlined the contributions of Profs. C. C. Caldwell, I. P. Roberts, H. H. Wing, M. W. Harper, E. S. Savage, S. A. Goldberg, F. B. Morrison, C. M. McCay, and other leading Cornell animal scientists. Prof. Maynard's contact with the department goes back to 1914.

Feed Efficiency

In another paper, Dr. J. T. Reid of Cornell summarized the results of his studies of the efficiency with which animals use various feeds. His conclusions are: "(1) Within a given species of animal, there is very little difference among individuals with respect to their ability to digest and absorb nutrients and in the efficiency with which they produce milk or meat from absorbed nutrients. (2) Selection of animals on these bases is not expected to result in improvement. (3) Individuals appear to differ mainly in the amount of feed they will consume and the level of feed intake at which they deposit body fat."

Dr. James H. Hilton, president of Iowa State University, who spoke at the dedication dinner of Cornell's $4,500,000 animal husbandry building, called upon land-grant colleges and universities to meet the challenge of the world population explosion.

Tracing the search started in 1880 for more critical evaluations of feed, Dr. Hilton said: "Today our knowledge of animal nutrition—'Feeds and Feeding,' if you please—has developed into a full-grown science requiring highly trained scientists, vast laboratory research facilities, such as metabolism laboratories, blood chemistry and radio-tracer laboratories, microbiological laboratories as well as the older laboratory facilities formerly used in feeding and digestion experiments."

Dr. Hilton said mathematical techniques would help the livestock producer determine the best ration for his livestock and the rotation of his

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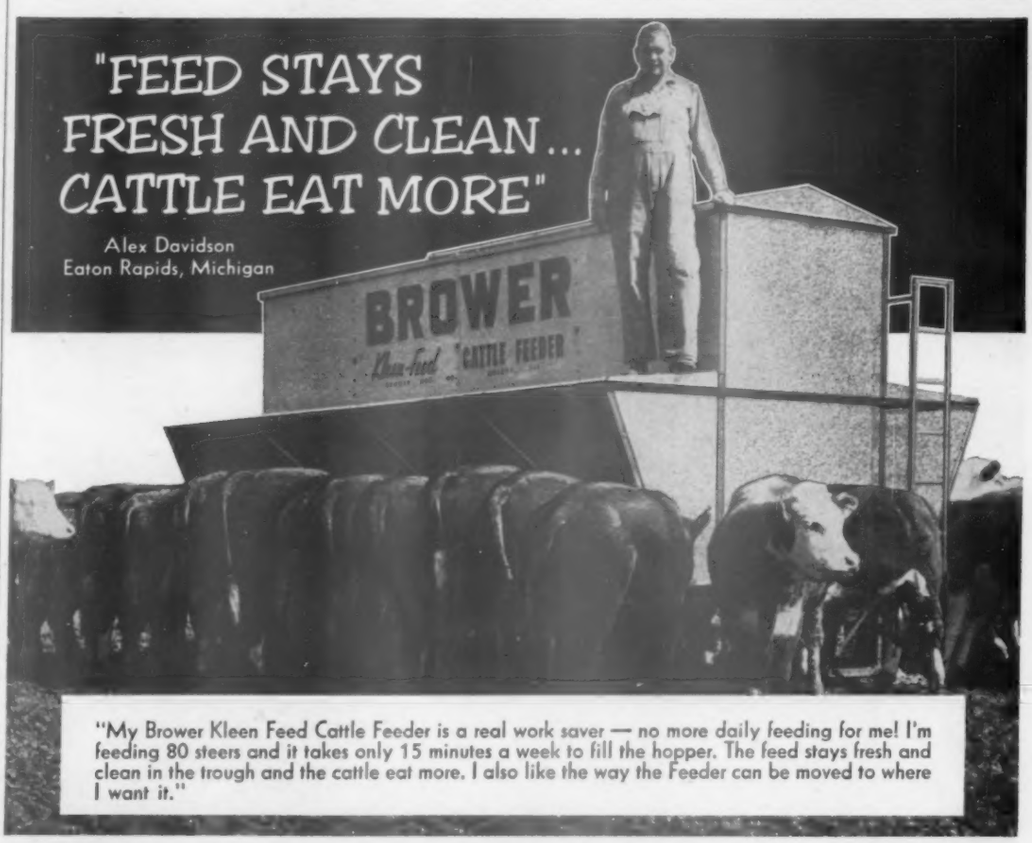

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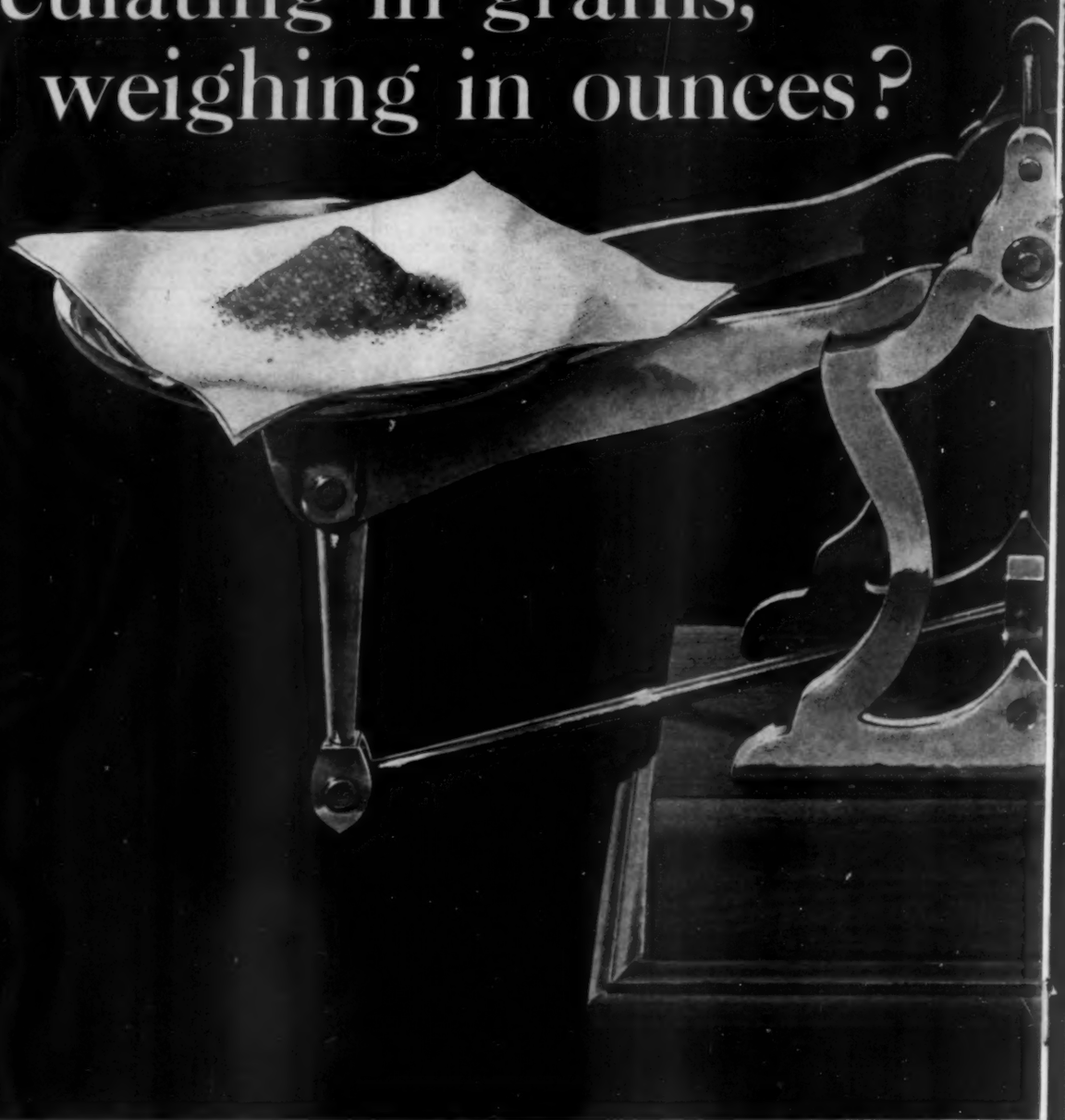
Calculating in grams, and weighing in ounces?



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For the first time, a vitamin A pre-mix with an even 12,000,000 units per pound

Eliminates the confusion and wastage caused by calculating the animal's needs in units, the feed formula in grams, and weighing the feed ingredients in ounces

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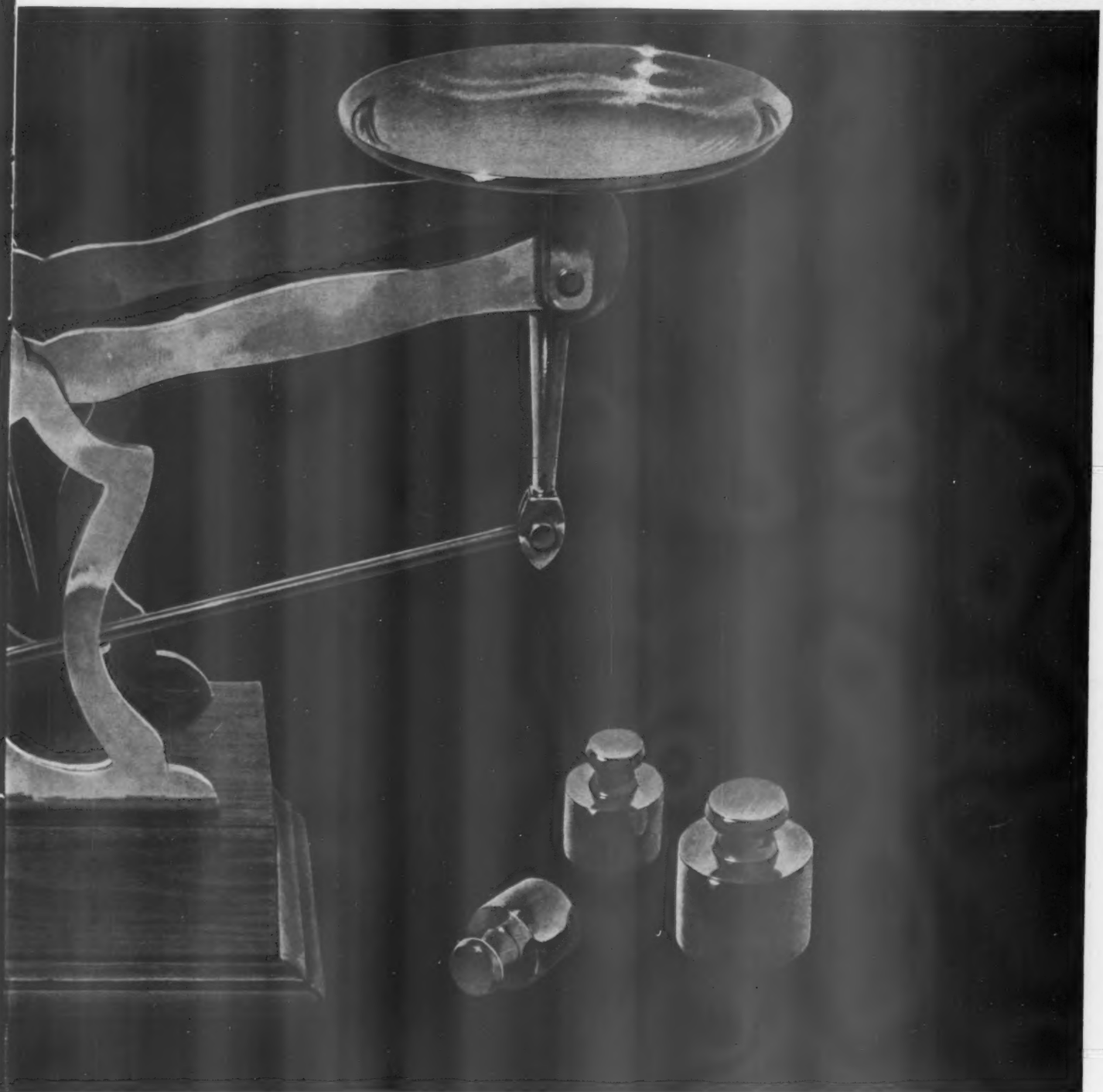

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farm at the same time. This would mean maximum profits for the farm as a whole, rather than just for the animal alone.

Mentioning Prof. Morrison's research, the university head continued: "His book Feeds and Feeding has not only been the text for the nutrition courses in our land-grant colleges and universities in America, it is used throughout the world by teachers and producers of livestock. I wonder if this country will ever produce his like again."

Citing the growth and expansion of animal science, Dr. Hilton confined his remarks to two basic animal science fields—nutrition and breeding.

Tracing the history of animal breeding, Dr. Hilton emphasized the need to work directly with the livestock producer: "As we all know," he said, "our land-grant colleges and universities have, at times, been subjected to criticism because we have become so specialized that we fail to consider the total problems with which the practical livestock producer must constantly deal in his daily operations. Certainly some of this criticism is justified."

Dr. William I. Myers, professor emeritus and former dean of the New York State College of Agriculture, presided at the dinner meeting in Statler Hall, and Dr. Kenneth L. Turk, head of the Cornell department of animal husbandry, introduced the guests.

TO GO ABROAD

OSKALOOSA, IOWA—Harold Palmer, president of Productive Acres Manufacturing Co. here, will leave soon for sales conferences in England, France, Germany and Holland. He says about $100,000 worth of PAMCO products have been shipped abroad the past year. The PAMCO plant this year has extended its operations with a new addition to handle stepped-up production.

Kansas Groups Tell Convention Plans

MANHATTAN, KANSAS — The Kansas Poultry Assn. and the Kansas Turkey Federation, Manhattan, have announced program plans for their 27th annual combined poultry industry convention.

Scheduled for Nov. 1-2 in the Broadview Hotel of Wichita the two-day event will include talks on business profits and losses, consumer buying habits for poultry and eggs, credit and marketing orders.

Discussing "Where Some of Your Profits Go" at one of the sessions will be Dr. Reed Rumsey, Dr. Salsbury's Laboratories, Charles City, Iowa.

"Sounding Board of Female Thinking" will feature a panel of Wichita women who will discuss buying habits of poultry and eggs.

Other talks will include one entitled "We Are Your Customers, Too" by Rick Harmon, manager, Myron Green Restaurant Chain. He will discuss what restaurants want from the poultry industry.

"How Money Is Borrowed" will be covered by Maurice Johnson, vice president of the First National Bank, Kansas City. This talk will deal with poultry financing.

Also slated to speak is Don Turnbull, executive secretary of the American Poultry & Hatchery Federation. Mr. Turnbull's talk is entitled "What About Government Marketing Orders?" Talking on the same subject will be Gene Beals, manager, California Turkey Promotion Board, Fresno, Cal.

Other activities include business meetings, two luncheons, a ladies breakfast on the second morning, egg show and turkey auction, musical entertainment and smorgasbord banquet.

Broiler Processing Firm in Iowa Will Raise Output 50%

FOREST CITY, IOWA — Because of an increase in the number of broiler growers in this area, processing capacity at Fryer Farms, Inc., poultry plant here has been increased 50%.

Ed Wooldridge, general manager of the processing firm, reports that additional growing capacity for 105,000 broilers has been added recently in this area. He pointed out that with five growing cycles these new houses will raise a half million additional broilers per year, about 10,000 more per week.

The need for additional broilers to enable the processing plant to operate nearer its constructed capacity has resulted in the formation of a new business, Forest City Feed & Supply, it was reported.

Nine business and professional men, all but two of them directors of Forest City Industrial Development Corp., subscribed $50,000 in capital for the new firm. The firm purchased an acreage just east of here on Iowa Highway 9 and has constructed three 40 by 250 ft. broiler houses. The new firm has qualified as a dealer for Purina feed—the specified ration for Fryer Farms broilers.

The firm has indicated plans for construction of more growing houses next year.

The new growing operation houses 11,000 birds in each of its houses, with 1,000 more to be added during winter cycles.

Other added growing facilities supplying the processing plant are five houses built by Harley Ouverson and Wayne Van Den Bosch, Purina dealers at nearby Fertile, Iowa, and a 30,000 bird unit owned by Marion Clayberg, Mason City, Iowa, Purina dealer and president of Fryer Farms.

Mr. Wooldridge also pointed out that the processing plant will begin handling at least 2,000 heavy fowl per week. He said that there is a market for heavy poultry in this area.

ROLLER MILL OPERATING

BIG SANDY, MONT.—Big Sandy's new roller mill is now in operation. Owned by local people who have invested over $50,000, the mill will add molasses and feed concentrates to rolled barley for cattle and hogs. Oliver Stevens will operate the plant.

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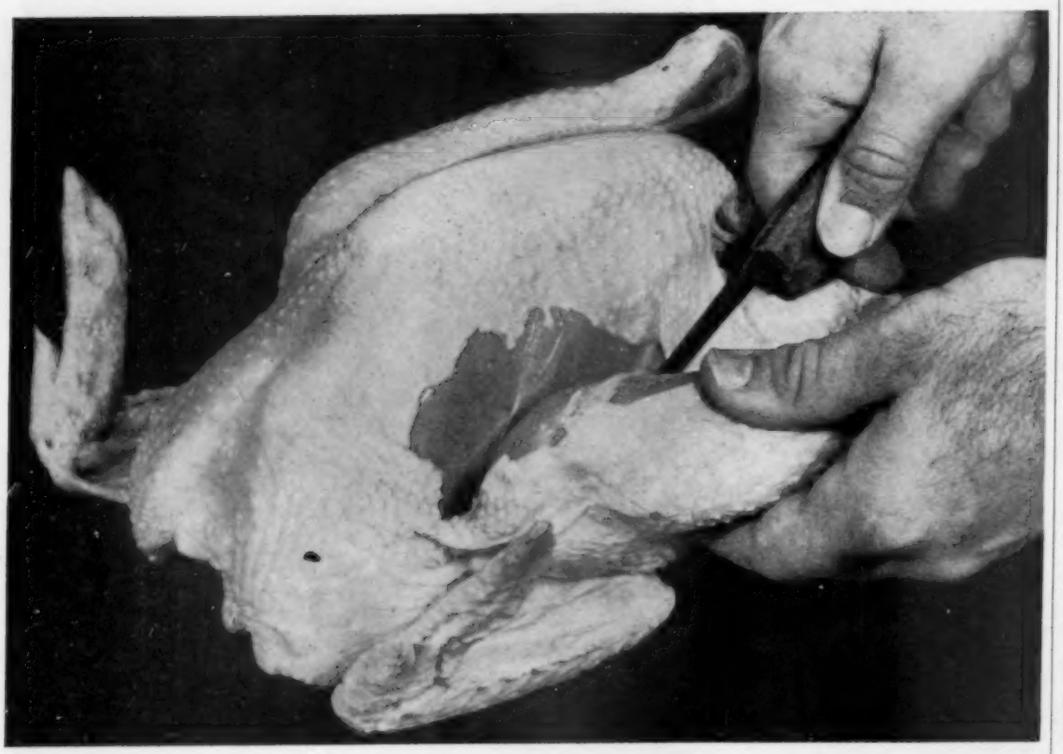

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Broiler Firm Making Changes to Improve Operations, Efficiency

By Jess F. Blair
Feedstuffs Special Writer

In an industry noted for its efficiency, a new round of changes is underway by companies seeking to improve their operational efficiency. One of them is Joe Ray, Inc., Danville, Ark.

A pioneer in the broiler industry, Mr. Ray is now feeding out about 2 million birds. His company is integrated except for the use of farm growers. But, there are departments in the firm which need strengthening, according to Mr. Ray. So, he has entered a building program designed to give him better feed control and a more efficient breeding and hatching operation.

He is renovating the feed mill by adding new equipment and increasing the capacity of feed manufacturing. The mill has been turning out 10 tons of feed per hour, but by midwinter this will be increased to 30 tons an hour. He is adding more grinders and mixers and is increasing grain storage to about 18 carloads.

His second project is the building of a breeder farm of 130,000 hens, where 11,500 pullets will be put into the houses every four weeks.

"This is a time when every owner must examine each department and tighten up," he says. "This doesn't necessarily mean a reduction in broiler numbers, but a study to determine where production costs can be lowered."

Advantages Cited

One advantage that Mr. Ray feels he has over some companies is that his farm growers are located close to Danville, with the average distance being 11.7 miles. This enables him to reduce hauling expenses on chicks and feeds. When a new grower is added, the distance from the feed mill is sometimes a deciding factor.

In servicing the farms, the company uses five bulk trucks that haul from six to eight tons each.

Mr. Ray studies feed ingredient costs carefully. In the last few months he says he has been using corn instead of milo because of the price, but at times in the past has fed milo.

"We think milo has about 93% as much feeding value as corn," he said. He is now using 4.3 to 5.0% fat, because he said any additional fat, up to 10% of the ration, will cost more than corn.

"We would keep 10% fat if it could be bought for 5¢ per pound," he stated.

He ships in all ingredients and makes a complete feed.

Neglected Areas

Another phase of the business that is commanding extra attention is that of getting vigorous baby chicks into the broiler houses at the lowest cost. Mr. Ray thinks that the egg production and hatching are the two most neglected parts of the industry because of the emphasis which has been placed on nutrition and other factors. By making improvements in his breeder hen flocks, streamlining operations and striving for better birds, he believes that vigor can be increased and production costs lowered.

The company hatches all its own eggs in a hatchery which has a 99,000 capacity. The breeder hen farm will provide a controlled and regular output that will eliminate the shortages and surpluses that have occurred occasionally, Mr. Ray said.

Mr. Ray built his processing plant in 1950 and then renovated and enlarged it in 1953. At present, he has 129 employees working in the processing department. The plant processes 80 birds a minute, and the birds are hauled to market in Mr. Ray's own trucks. He occasionally brings a load of corn on the backhaul, but

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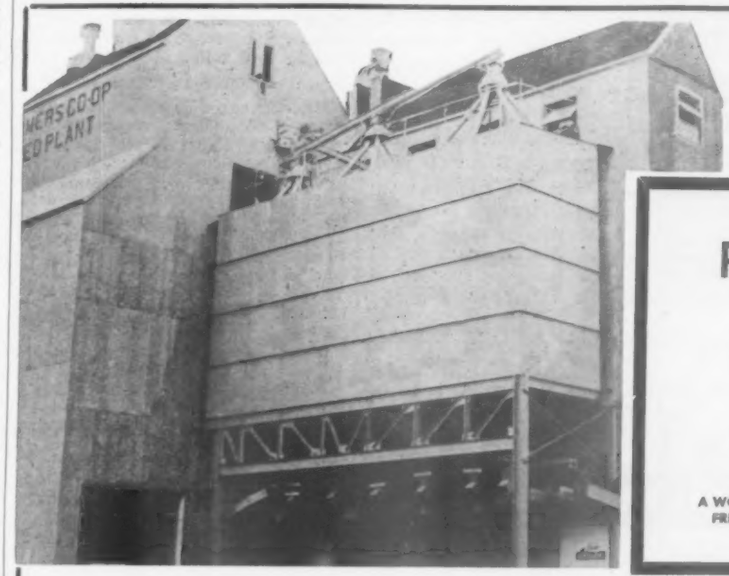

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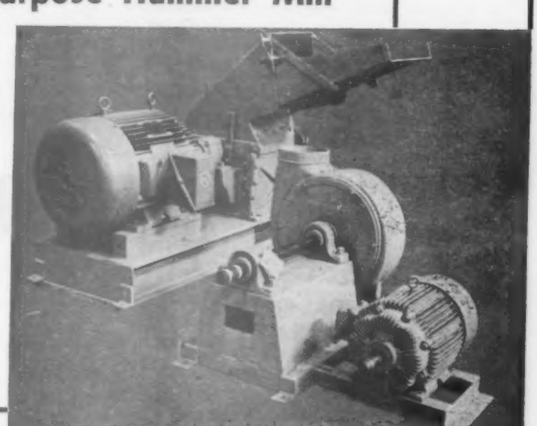

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Company Laboratory

The company has a laboratory that is suitable for simple diagnostic tests. Anything that requires a more elaborate study is sent to the state laboratory. Mr. Ray has one veterinarian on his field service staff. The veterinarian works very closely with the staff at the university, and will spearhead the company's plan to develop a hardier chick that is not susceptible to disease, Mr. Ray pointed out.

At present Mr. Ray is not going along with the trend among some to grow broilers in company-owned houses. He says he has always used farm growers and is satisfied with this arrangement.

"They haven't all been as efficient as they should have been," he said, "but the poor ones have dropped out, and the ones I have now are doing a good job. Each new grower added must meet certain requirements. He must be in a desirable location, he must provide some kind of insulation under the roof, and he needs a certain number of brooders, waterers and other equipment. Unless he meets these requirements, we won't sign a contract with him."

Flexible Pay Rate

Mr. Ray has a flexible rate of pay which is based upon production efficiency and market price. This last June he revised his payment plan as follows: "When the Arkansas broiler market is 13¢ or below on the day we pick up your chickens, the guarantee will be—top 10% will receive 7¢ per head of marketable birds; next 30% will receive 6¢ per head of marketable birds; bottom 60% will receive 5¢ per head of marketable birds."

When prices are from 13.01¢ to 14.99¢ the same percentage factors are used, but the payment to farm growers ranges from 6¢ to 8¢ per marketable bird. When the Arkansas market is above 15¢ the payment to growers is from 7¢ to 9¢.

"I think this market clause is one of the trends that will continue," Mr. Ray said. "Prices vary so much and change so often that a company must have a more flexible contract. When we are making a good profit, the growers will share in it. But when prices drop to a break-even or a lower level, then the farm grower must also absorb his part of the bad breaks."

The farm growers now have a capacity of 2,600,000 birds but the company is feeding out only about 2 million. This extra capacity, which will take care of any immediate expansion, will eliminate the need of adding any more farm growers for awhile, Mr. Ray commented.

"I like the farm grower set-up," Mr. Ray said. "These people own their farms and must depend upon this for a living; therefore most of them are interested in working hard and cooperating with us. At present we have no plans of any kind that would mean the building of our own broiler houses."

Bank Says South Is Being 'Invaded by Merchant Credit Plan'

ATLANTA, GA.—The broiler industry in the South is being invaded heavily by the "merchant credit" plan, which was first introduced in the South in the 18th century by the British, the Atlanta Federal Reserve Bank says.

In the broiler business, the bank says, it appears to be a matter of convenience to finance things in one big package.

The "merchant credit" plan means that a merchant supplies farmers with equipment and goods, including food and clothing, and collects only when the crop is sold. This plan came into being when British merchants financed farmers with supplies on a long-term credit at high rates of interest. In those days, it was known as "the furnish" by tenant farmers and sharecroppers, the bank said.

"The system is reappearing throughout the South after all but disappearing with the advent of modern banking systems, diversified agriculture and government farm aid," bank officials stated.

"Its return has been because certain segments of agriculture find it convenient and need more capital than banks and finance companies will supply quickly.

"Most merchants are going for it more to expand sales than to earn interest, as in the old days," the bank observed "Little is known about the cost to the farmer under present day methods.

"Most farmers today use the plan as a supplement to bank credit, and they are not in hock to the merchant for everything they buy and use as was the case under the old plan."

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'Floor Pens Best for Layers'

UNIVERSITY PARK, N.M.—Floor pens have been shown to be more satisfactory for laying hens than either colony or single cages, report researchers at New Mexico State University.

The studies indicated that feed conversion was better, incidence of blood spots lower and production higher in the floor pens. Mortality, internal quality, shell thickness and egg weight were essentially equal for all three methods, it was stated.

"The management of laying hens for table egg production has been in a state of flux for many years," says Dr. D. W. Francis, head of NMSU's poultry science department. "Loose floor housing has remained as a standard practice. Individual cages became popular before World War II, passed out of the picture, and then returned to popularity around 1950. Recently, there has been a tendency to use a colony-type cage where two to 40 birds are kept together."

Dr. Francis and Dr. R. H. Roberson, assistant professor, say they felt there was a need to compare egg production, various egg quality factors, mortality, feed conversion and the effect of any unusual condition upon pullets housed in floor pens, colony cages and individual cages Their description of the experiment follows:

Ready-to-lay single-comb White Leghorn pullets from the station flock were allotted at random into three groups: Birds housed in one building in loose litter floor pens; a second group housed in another building in six colony cages allowing 15 birds per cage, and a third group housed in 80 cages holding individual birds.

10 Month Study

Each group was maintained for 10 months without culling or replacements. The units were depopulated and cleaned, and a new group of pullets was housed for the second year.

Floor birds were trapnested five days per week. The production for the other two days was recorded as total production. Daily egg production was recorded for each individual cage. Egg production was recorded daily for the colony group as individual bird production could not be ascertained. Eggs were collected four times per day from all units.

All birds that died were examined to determine the cause of death. Feed consumption was recorded for each group and was expressed as pounds of feed per dozen eggs. Total feed cost was calculated for each unit.

During the second year of the test, internal quality, shell thickness, egg weight and incidence of blood spots were determined during the fifth and tenth months of production.

The two-year average for egg production favored the floor pens and egg production was lowest in the colony cages. The birds in individual cages produced slightly more eggs the first year. Production during the second year was undoubtedly affected by the occurrence of visceral gout in both cage groups. There was none observed in the floor housed group.

Better feed consumption was obtained with the birds in the floor pens. Feed wastage was considerably more in both cage groups and was at a minimum in the floor feeders.

This indicates that feeders were filled too much for economical operation. It is obvious that feed cost would parallel feed conversion with the floor pens being most economical.

Mortality was not unusually high, although the presence of visceral gout in the cage group is hard to explain. There is a possibility that the lack of exercise may be a predisposing factor, as no cases were observed in the floor pens.

Internal egg quality and shell thickness comparisons indicate little difference between the treatments at the times these were measured. The decline in quality and eggshell thickness was as expected because quality declines as the production period becomes longer and the temperature increases.

The slight drop in egg size, although there is no essential difference between the groups, indicates the effect of hot weather and thinner shells.

The incidence of blood spots between floor and cage groups is marked, although there is essentially no difference for the two cage groups for the two periods. The incidence of blood spots is a serious economic factor, as it means a loss of approximately 4¢ per egg for each affected egg.

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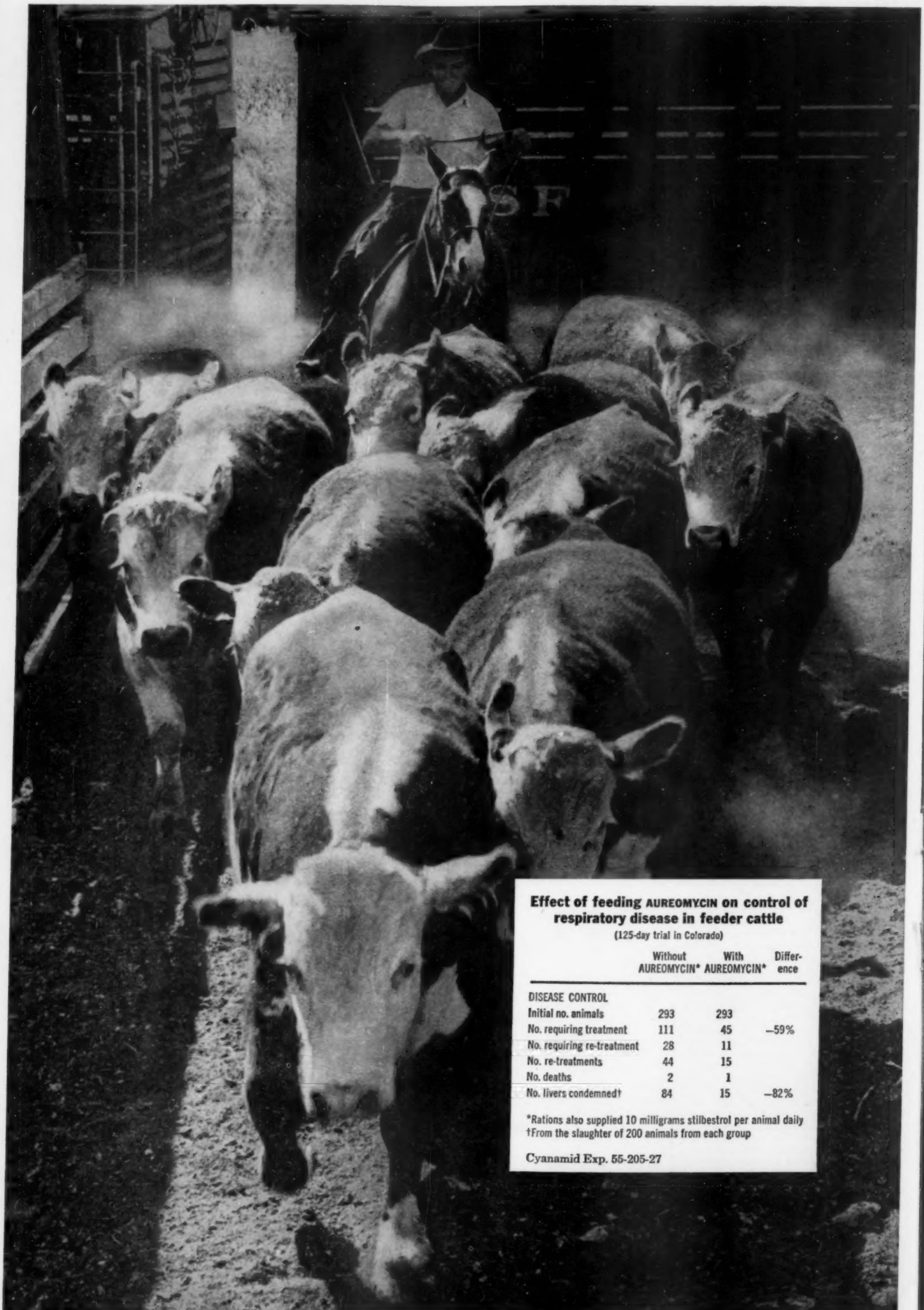

Effect of feeding AUREOMYCIN on control of respiratory disease in feeder cattle

(125-day trial in Colorado)

	Without AUREOMYCIN*	With AUREOMYCIN*	Difference
DISEASE CONTROL			
Initial no. animals	293	293	
No. requiring treatment	111	45	–59%
No. requiring re-treatment	28	11	
No. re-treatments	44	15	
No. deaths	2	1	
No. livers condemned†	84	15	–82%

*Rations also supplied 10 milligrams stilbestrol per animal daily
†From the slaughter of 200 animals from each group

Cyanamid Exp. 55-205-27

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First few weeks critical period

Those first two or three weeks following the arrival of cattle are critical. Shipping leads to stress. Unloading and sorting add new stress. Changes in surroundings or in weather — new feeds and feeding methods — add still more stress.

Stress often brings on shipping fever, bacterial diarrhea, foot rot, secondary bacterial infections, subclinical or invisible diseases.

Stop losses for your customers

Stress feeds with AUREOMYCIN help minimize losses from these diseases. Provide your customers with feeds that will give 350 milligrams of AUREOMYCIN per head per day — *to be fed until the critical period is past.* No antibiotic, chemobiotic, drug or hormone equals AUREOMYCIN in its activity against disease. Cattle getting stress levels of AUREOMYCIN *every* day come through the critical period strong and vigorous — go on full feed quickly. After the critical period, cattle can be continued all the way to market on feeds that provide 70 milligrams of AUREOMYCIN per head per day. This will keep them healthy and making economical gains.

Aureomycin prevents shipping fever

In the table shown on the opposite page, you can see the effectiveness of AUREOMYCIN in controlling respiratory diseases in cattle. In this experiment AUREOMYCIN was fed at the rate of 350 milligrams per head daily for 7 days, followed by feeding 70 milligrams per head for the remainder of the experiment. Note the high reduction (59%) in the number requiring treatment in the group fed AUREOMYCIN. This lot produced over 7,000 extra pounds of beef!

Recommend stress feeding

If you are not now making a stress feed containing high levels of AUREOMYCIN for feeder cattle, plan to do so. There's extra profit in such feeds for your feeders — and extra sales volume for you through increased customer satisfaction. Complete details on stress feeds containing AUREOMYCIN are given in a new booklet, "How to Build Bigger Beef Profits." This booklet is for distribution to your customers. For your copies get in touch with your Cyanamid representative or write direct to American Cyanamid Company, Agricultural Division, Princeton, N. J. *®AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

Value of AUREOMYCIN in the ration of fattening cattle
(86-day trial in Nebraska)

	Without AUREOMYCIN*	With AUREOMYCIN*	Benefits from AUREOMYCIN
Number of cattle	205	208	
Average initial weight (lb.)	846	859	
Average final weight (lb.)	1163	1195	
Average gain per steer (lb.)	317	336	19 lb. extra
Average daily gain (lb.)	3.66	3.88	0.22 lb. more
Feed per cwt. gain (lb.)	760	690	9.2% less feed
Cost per cwt. gain (feed, labor, etc.)	$19.18	$18.27	$0.91 less cost
Extra return per head	—	—	$4.26

*Rations also supplied 10 milligrams stilbestrol per head daily

Cyanamid Exp. 56-200D-7

Shown above are the results of an experiment with AUREOMYCIN in the ration of fattening cattle. In this trial, AUREOMYCIN was fed to one group of cattle at the rate of 350 milligrams per head per day for the first 30 days followed by 70 milligrams per head per day for the remainder of the trial. Note these significant advantages with AUREOMYCIN: (1) increased average daily gain by 0.22 pound (19 pounds in 86 days); (2) improved feed conversion by 9.2%; (3) reduced feed cost 91¢ per 100 pounds of gain; (4) gave an extra return of $4.26 per head. In addition, AUREOMYCIN reduced the incidence of shipping fever, pneumonia and rhinotracheitis. Cattle fed AUREOMYCIN were more uniform, had better bloom.

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Mill Operators Find FDA Inspector Can Be Source of Information, Guidance on Rules

By ROBERT BROWN
Feedstuffs Special Correspondent

ATHENS, GA.—The food and drug inspector isn't such a bad boy after all and, if mill operators will cooperate with him, he can be of great assistance. He's on his job to work with the mill to smooth out wrinkles to the mutual satisfaction of everyone.

A good many mill operators today are realizing the inspector is a source of information and guidance in meeting the regulations of medicants to see that feeds leave plants with exactly the specifications required.

Dr. Fred J. Kingman, Division of Veterinary Medicine, Food and Drug Administration, Washington, said there are cases of where inspectors have offered valuable assistance. The inspectors are not only concerned with looking for violations but ways to prevent them.

Speaking at the Southeastern Feed Production School, he offered 13 rules to go by to avoid violations. They are also things inspectors look for and want to see. Dr. Kingman's 13 points follow:

(1) Inspectors particularly notice cleanliness and general order of the plant.

(2) How is the plant taking care of potent drugs?

(3) What about potent drugs you have on hand? How is repacking for making batches of feed handled? Are these re-packaged items properly labeled and does the man handling them know what's going to be done with them? Is there proper control of labels to avoid mislabelling? Does one person—and one person only—have control of these packages? Are labels checked and rechecked? Is it awfully easy for labels to be switched accidentally?

(4) Cleaning of mixing equipment is important. The management should keep pounding away at the person who does the mixing to see that mixing equipment is thoroughly cleaned after each composition.

(5) Lack of thorough cleaning of bulk hauling equipment is where some mills fall down. A special medicated feed is transported to a customer, which may result in residue being left in the bulk bodies.

(6) Special labeling precautions on bulk shipments are necessary. Management should check to see if invoices specifically mention not only the composition, but feeding and handling directions.

(7) Proper samples should be taken for assay so that a representative sample is provided. Samples should be taken from sides, or ends or both so as to provide a good composite sample.

(8) Be sure that brochures go out with feed and double check to see that they are comparable with the type of feed going out.

(9) Half open bags containing potent materials are not a good sign for inspectors to see. They collect dust and there is a possibility of contamination, especially if there is proximity to other half open bags.

(10) Improper weighing scales as to ounces and grams.

(11) What disposition is made of sweepings? Are they burned and discarded? Or, are they swept up, properly identified and used for feed?

(12) Inspectors are keenly watching for any evidence of rodents, pigeons and sparrows which may bring about contaminations. Pigeon droppings which may accumulate in plant dust are responsible for transportation of a lot of disease. These dust carriers can go so far as to affect employees who breathe the air in the mill. Rodent urine is also becoming a factor.

(13) Where are batch cards kept? If cards are maintained in the office as well as in the plant at mixing points, do the cards correspond? These should be checked periodically. It is possible that as new directions and formulas are put on office cards the same information does not get to the cards at mixing points.

"The best way to get information from inspectors is a program of cooperation," Dr. Kingman pointed out. "Many times inspectors are able to pass along an analysis of a plant that would cost the operator money to obtain elsewhere. And it makes work easier for all concerned."

The production school was sponsored by the Southeastern Poultry & Egg Assn., with the cooperation of Feed Production School, Inc., and the University of Georgia. It was held at the university.

Soda in Dairy Feed

EAST LANSING, MICH.—Use of sodium bicarbonate in dairy cattle rations is not recommended as a general practice, says Dr. R. S. Emery, Michigan State University dairyman.

"The inclusion of 2 to 4% of sodium bicarbonate (baking soda) in the grain might be of benefit in some cases where grain is suspected of cutting down the fat tests," Dr. Emery says. "However, baking soda presents some palatability problems, and low fat tests may also occur for a number of reasons which baking soda will not influence."

Rations containing large amounts of grain with small amounts of roughage or finely ground roughage have frequently been responsible for low fat tests in milk, he explained.

A series of experiments was started at Michigan State University to find a practical solution to this problem, he says.

Several groups of Holstein cows were rotated on rations which contained varying amounts of grain, alfalfa hay, dehydrated alfalfa pellets and sodium bicarbonate, he says.

Milk bloat occurred in all three groups, but seemed to be aggravated by the sodium bicarbonate, he said. Baking soda increased the rumen pH in one experiment, but had little or no effect on organic acid composition, Dr. Emery concluded.

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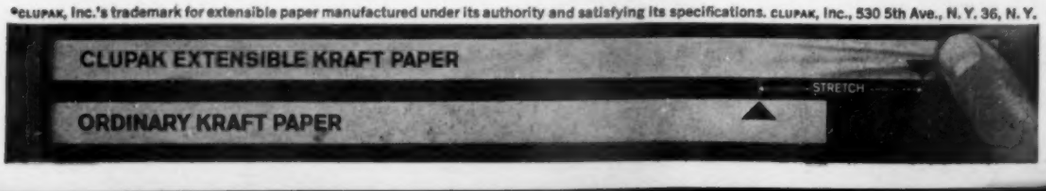

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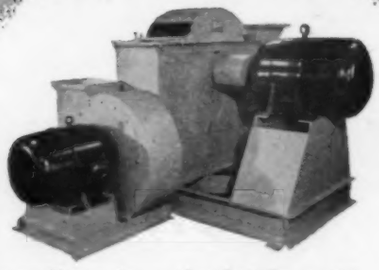

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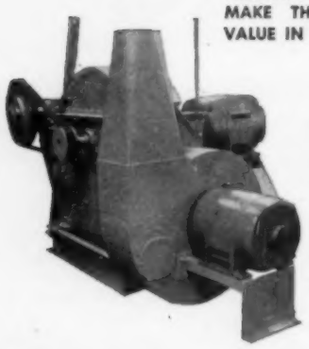

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By Dr. Leonard W. Schruben, Agricultural Economist, Kansas State College

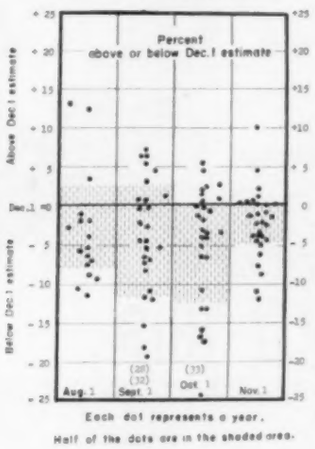
Large Soybean Supply Pushes Down on Price

New records are an old habit for soybeans. Who could have foreseen 10 years ago that the U.S. would produce 700 million bushels or more soybeans in one year? Yet, the official government estimate forecasts a harvest well above this figure.

So we are in new territory again with soybeans. Having never had a crop this size before means comparison with past seasons are less useful. However, a good look at history can help us in preparing for the future.

One of the first things we need to do is to get the crop estimate in focus. Remember, crop estimates are just that—estimates. No one can tell how many beans will be harvested until the combines have been at work.

EXHIBIT 1. Estimates of Soybean Production, U.S., 1932-60



Many changes can take place between the time an estimate is made and harvest.

Estimates of Production

To show changes in crop prospect as the season progresses we have prepared Exhibit 1. It may look complicated, but if you buy or sell soybeans you can afford to take a few minutes looking it over. We have used official crop reports as a basis for comparison. The estimates made on the first of each month from August through November since 1932 are compared with the estimate made on Dec. 1 of the same year.

The Dec. 1 estimate is shown on the base line as zero. Each dot represents a year. When a dot is below the line it means the estimate was less in that month than in December the same year. The opposite is true when the dot is above the line.

For example, in the November column, there is a dot at the +10 level. This means that in one of the years the estimate made in November was 10% higher than the final estimate in December. Half of the years are included in the shaded area—the middle half.

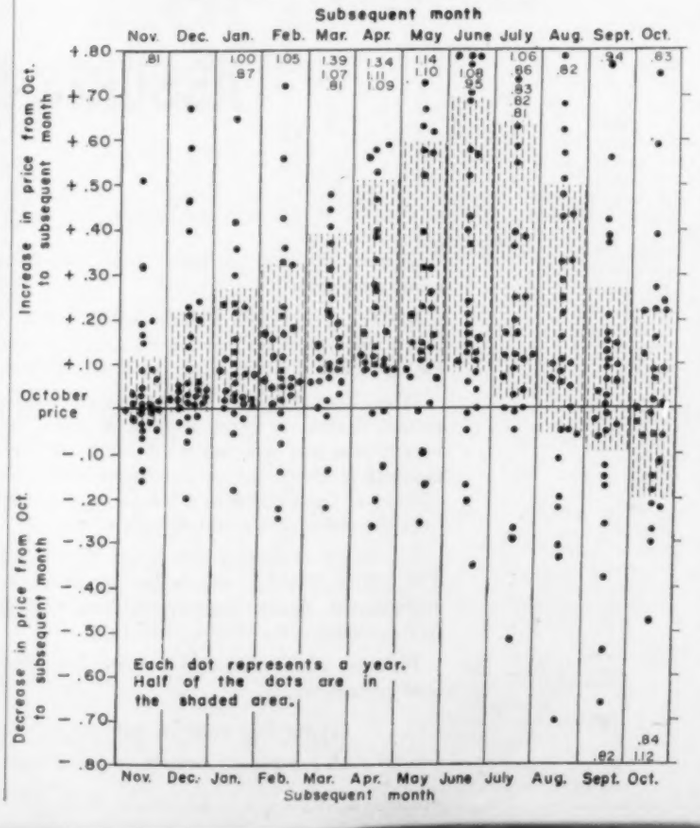
You can see there has been a tendency for crop prospects to improve during the season. If this happens this year you can expect an even larger crop than indicated by early season estimates. Of course, there have been improvements in recent years in estimating procedures. When there is a better than average growing season it is almost certain to result in steady crop improvement.

Change in Prices

What does this big crop mean to soybean prices? Here again a little history will be helpful. The direction and extent of changes in prices from October to the 12 following months are shown in Exhibit 2.

Here is how to read this exhibit:

EXHIBIT 2. Change in U.S. Farm Price of Soybeans From October to Subsequent Months, 1928-60



Each dot represents change during one year from October to the following months indicated at the top or bottom of the column. For example, in the December column one dot is located at the —20¢ level. This means that prices went down from October to December 20¢ during one of the years.

Other comparisons are made in the same manner. The number at the top and bottom of the column show price changes too large to fit the chart. At the head of the February column, for example, is a 1.05. This means during one of the years prices went up $1.05 from October to the next February. The shaded area includes half of the years—the middle half.

Odds favor a moderate rise in soybean prices after a harvest season low. Prices are expected to recover and hold close to the support rate. A seasonal rise to the CCC selling price seems the most logical prospect by mid-summer. But keep your eyes open for changing situations. Soybean prices move fast—as last year's record shows.

Canada Veterinarian Discusses Additives

BANFF, ALBERTA—The number of feed additives on the market today makes it difficult for the veterinarian to keep abreast of this phase of the livestock business.

"The practicing veterinarian finds it difficult to keep up with his field," a Guelph, Ontario, veterinarian told the annual convention of the Canadian Veterinarian Medical Assn. here.

Dr. D. C. Maplesden, in a report, added: "It is more difficult to evaluate the various additives as they are introduced."

The additives Dr. Maplesden referred to were classified as non-nutrient additives such as hormones, enzymes, tranquilizers and antibiotics. The use of additives, especially antibiotics, has at times been "controversial," he said. However, feed additives are here to stay and the veterinarian profession should keep abreast of the newer developments in this field, he commented.

He said the profession should endorse those which are of benefit but should not hesitate to denounce those which are of no benefit.

"Some of the additives have been introduced and widely used even though all published reports have shown no response or only a slight response which was not statistically significant," he said.

Some additives such as hormones when fed orally or injected cause an increase of growth of about 17% and a 12% improvement in feed efficiency, he said. However, when hormones are fed within 60 days of slaughter, they may leave a residue in meat which could prove harmful to human beings, he noted.

Dr. Maplesden points out precautions that should be considered in determining whether an additive is effective:

(1) They must be safe and leave no residue in the meat.

(2) The net profit must increase.

(3) It must be effective under different feeding conditions.

(4) It must give greater response than those already in the feed, or must give an added response to such feeds.

Denver Event Planned

DENVER, COLO. — The Denver Feed & Grain Club, composed of 110 grain and feed dealers in the Denver metropolitan area, will hold its annual fall dinner dance Nov. 25 at the Petroleum Club.

The club also recently held its annual golf outing at the Valley Country Club, with 83 members attending. Bernie Barker of Lamar won the top golf prize. Bob Wier, Colorado Grain, Milling & Feed Dealer Assn., was second. Jim Buckner, Industrial Molasses Corp., won the Fred Lake Trophy for the best score, and door prizes were won by J. F. Malo of Intermountain Elevator Co., and Keene McGalliard of Kellogg Grain Co.

NEW ARIZONA FIRM

PHOENIX, ARIZ. — Redlum Research Corp. has been opened to produce poultry feed supplement, cleaning fluids, etc., with Tracy Gaffey as president.

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STAPHYLOCOCCAL SYNOVITIS A killer of growing turkeys in many areas, "Staph" is also known among turkey growers as Weak Legs, Hock Disease, Staphylococcal Arthritis and Old Joe. It is most easily recognized by localized infection and swelling in the tendon sheaths of the turkey hock and wing joints. It also manifests itself in poor fleshing and frequently results in death.

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. . . Lloyd Buis & Sons, Cloverdale, Indiana. *No custom mix services offered!* Second year of operation. Selling 2,300 tons of *complete feeds* per month—completely dominating the market in the sale of complete rations, grain purchasing, fertilizer and farm supply sales.

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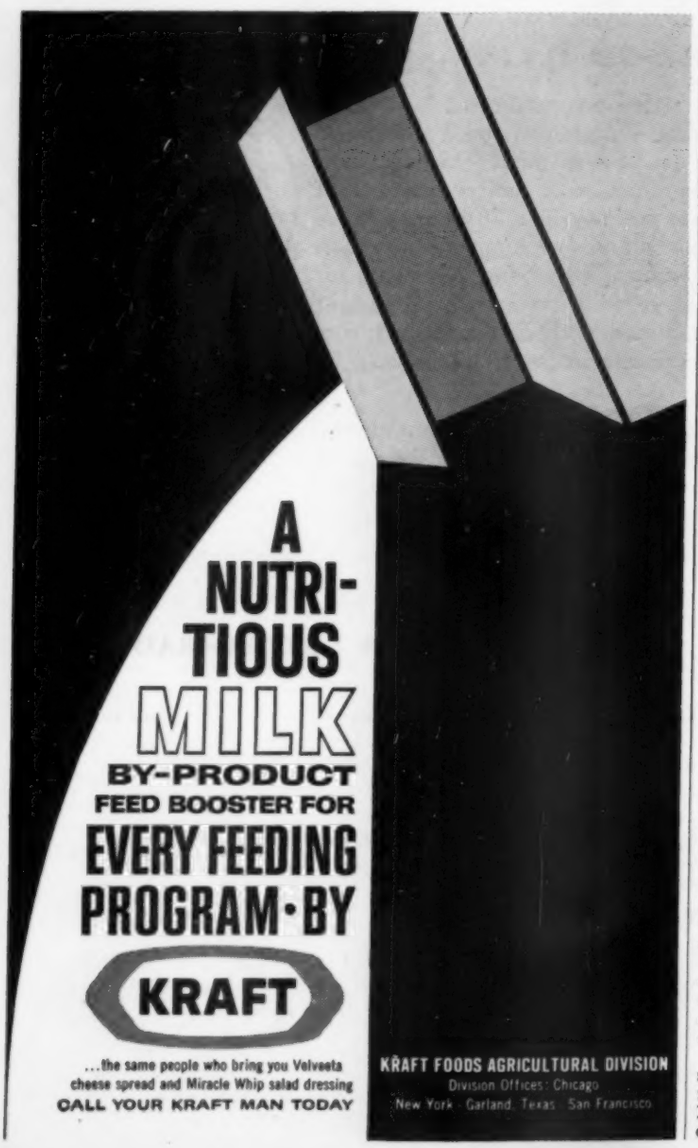
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POULTRY DAY PANEL—University of Illinois extension poultryman S. F. Ridlen (right) points out the location of the known Illinois poultry flocks with 1,000 birds or more to panel members who discussed processing and utilization of poultry manure. (Left to right) Art Muehling, University of Illinois agricultural engineer; A. L. Lang, professor of agronomy; J. R. Hayes, Champaign; Aubrey Reid, Belleville. H. W. Hannah, professor of agricultural law, was not present when the picture was taken.

Illinois Experts Discuss Poultry Nutrition, Disease, Manure Disposal

By Special Correspondent

URBANA, ILL.—Producers, hatcherymen and industry representatives gathered here recently for the 14th annual Illinois All-Industry Poultry Day.

Dr. H. M. Scott, head of the poultry division, reported that fish meal varies in its value as a substitute for soybean meal in poultry rations. He reported that they found a top quality fish meal was 2¼ times more effective than the lowest quality meal when tested as the sole source of protein.

In subsequent trials, 30, 60 and 100% fish meal protein was substituted for equivalent amounts of soybean protein in a corn-soybean ration. The good fish meal improved the performance of growing chicks by 5 to 10% at all levels of dietary protein. The poor fish meal did not always improve the rate of gain, however.

When good fish meal completely replaced soybean meal, performance was improved by 7 to 9%. But poor quality fish meal failed to produce as favorable a gain as soybean meal in the fortified corn-soybean meal ration.

Disease Control

Dr. L. E. Hanson, University of Illinois veterinarian, pointed out that respiratory infections go clear into the bones, a situation unique for poultry as compared to other animals. Respiratory diseases may be caused by bacteria, fungus, or virus, he reported.

Forced air ventilation spreads disease if it is present in a large, confined population of birds. He recommended that producers provide adequate ventilation and do a good clean-up job before starting new chicks.

Dr. Hanson recommended that producers not use a combination of vaccines on young birds already infected. Sometimes trouble has developed when producers used mixed bronchitis and Newcastle vaccine. Dr. Hanson also warned about "having too much faith in antibiotics." They do hold new infections from developing, but if infections are already present in air sacs or bones, the antibiotics can't clean them up, he pointed out.

University of Illinois agricultural engineer Art Muehling recommended three positive steps for dead bird disposal: burial, burning in an incinerator, or use of disposal pits.

Although burial may work fine for small producers, the larger producer might find this a costly method. Burning is effective when a hot fire can be used. It also leaves no source of pollution for wells or streams. Disposal pits may have the most advantage for the large producer, although no one knows for sure how long a disposal pit will last.

Calcium Levels

University of Illinois poultry scientist D. J. Bray reported that recent research indicates that the 2.25% calcium in poultry rations recommended by the National Research Council may not be enough. Higher rates of lay, feed intake and temperatures can affect calcium needs.

In Illinois tests, protein levels did not seem to affect egg shell quality, but low levels of calcium caused thinner shelled eggs. When hens were fed 4% calcium in the ration, Dr. Bray found less decline in shell weight than when hens received only 2.5% calcium. It also appeared that adding calcium in warm weather would not keep shell quality high.

High laying hens need more than 2.5% calcium. At least 3%, maybe more, is needed, Dr. Bray concluded.

O. B. Ross, head of the University of Illinois animal science department, cited poultry meat as a definite competitor for red meat. He pointed out that the per cent increase in broiler consumption in recent years has been about the same as the decrease in pork consumption per capita.

Dr. J. O. Alberts, University of Illinois veterinarian, reported that Illinois chickens had epidemic tremors (or avian encephalomyelitis) as early as 1940. The disease was active in 1958 and 1959 but less important in 1960 and 1961. He pointed out that the virus probably passed through the yolk of the infected hen during the incubation and active period of the disease. Birds recovered from natural infection develop antibodies that are capable of neutralizing the virus. Recovered birds usually have sufficient immunity to protect themselves against future exposure.

Dr. Alberts said that he would recommend keeping a laying flock that had recovered since it will be highly resistant to the disease and chicks hatched from eggs produced by this flock will also be resistant for the first two to three weeks.

Although some experimental live

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GOVERNOR TASTE-TESTS CHICKEN—Gov. Nelson A. Rockefeller of New York (left) taste-tested a corn crisped chicken drumstick when he visited the National Broiler Council booth at the New York State Fair. Dr. R. J. Krueger, NBC's director of research, hosted the governor during his visit. The Poultry Foods Festival was a test project for NBC in evaluating the new type exhibition as a potential means of reaching the consumer.

vaccines have been produced, Dr. Alberts said that not until we find a live natural mutant, AE strain or develop a very mild AE, should we promiscuously spread the disease about.

Manure Disposal

Extension poultryman S. F. Ridlen moderated a panel on processing and disposing of poultry manure. University of Illinois agronomist A. L. Lang reported that poultry manure is a good fertilizer—twice as valuable as other livestock manure. A ton contains about 20 lb. of nitrogen, 16 lb. of phosphate and 4 lb. of potash.

If properly used, the manure amounts to an extra 1½¢ lb. for broiler producers or an extra dozen eggs per bird for egg producers.

To get full value of manure, Mr. Lang recommended proper care and storage. Since nitrogen is easily lost, he suggested treating with superphosphate using about 2 lb. per 100 hens each day. Good litter will also mean little loss.

Since poultry manure is very rich, Mr. Lang suggested using on crops requiring nitrogen such as corn, vegetables and lawns. He recommended two tons per acre for vegetables and farm crops.

Lagoon System

Art Muehling, University of Illinois agricultural engineer, pointed out that cost of equipment and labor to dispose of manure may be more than its value. For this reason, some operators have built a lagoon disposal system. He reported that 15 stabilization ponds for domestic and industrial wastes are in operation in Illinois. Use of lagoons for animal wastes has come about mostly in the last 15 years, however.

Use of lagoons still is in the experimental stage, Mr. Muehling stressed. Research workers are in no position to forecast their performance for long periods. The lagoons in use are usually farm ponds from three to five feet deep. Poultry manure is flushed into the lagoon periodically where bacteria digest it. A surface area of eight square feet per bird is recommended although some ponds in use allot less than this.

Some producers and research workers are using indoor lagoons, ponding water directly under a slatted or wire floor in the poultry houses and allowing all droppings to fall directly into the water.

Aubrey Reid, Belleville egg producer, reported their plans for processing and selling poultry manure. In their operation, they are producing 3½ to 4 tons a day. They are developing a drying system and plan to package in 2, 5, 10, 25 and 50-lb. bags. They expect to develop a trade name and attractive package and market their product to homeowners and gardeners.

J. R. Hayes, Champaign, reported that they have sold sun-dried and hand-processed poultry manure under the trade name "Unowhat." It provides a supplementary income to their egg business.

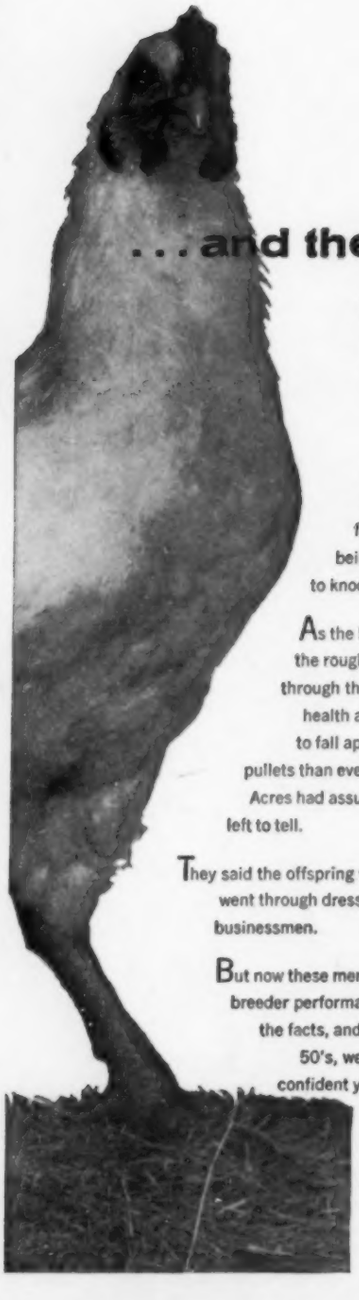
H. W. Hannah, professor of agricultural law, reported on the legal aspects of processing and disposing of poultry manure. He pointed out that on rented farms, manure is considered part of the real estate and cannot be sold without permission of the landlord.

Manure processing may have a nuisance status and could create health hazards or disagreeable odors. If this happened, injunction could be ordered, the operation could be stopped, or damages might be caused.

He pointed out that regulation of the handling and processing of poultry manure might be carried out by municipalities, counties if they have zoning authority, townships with health boards, public health districts, and the state under the Illinois fertilizer law.

Mr. Hannah reported that the Illinois fertilizer law has exempted unprocessed manure, but no court decision involving interpretation has been made. This indicates little if any enforcement of the law.

At the present time, he believes that poultry manure is probably not subject to the fertilizer law unless some chemical change in its composition is involved. This does not mean, however, that at some future time poultry manure might not come under some law, he concluded.



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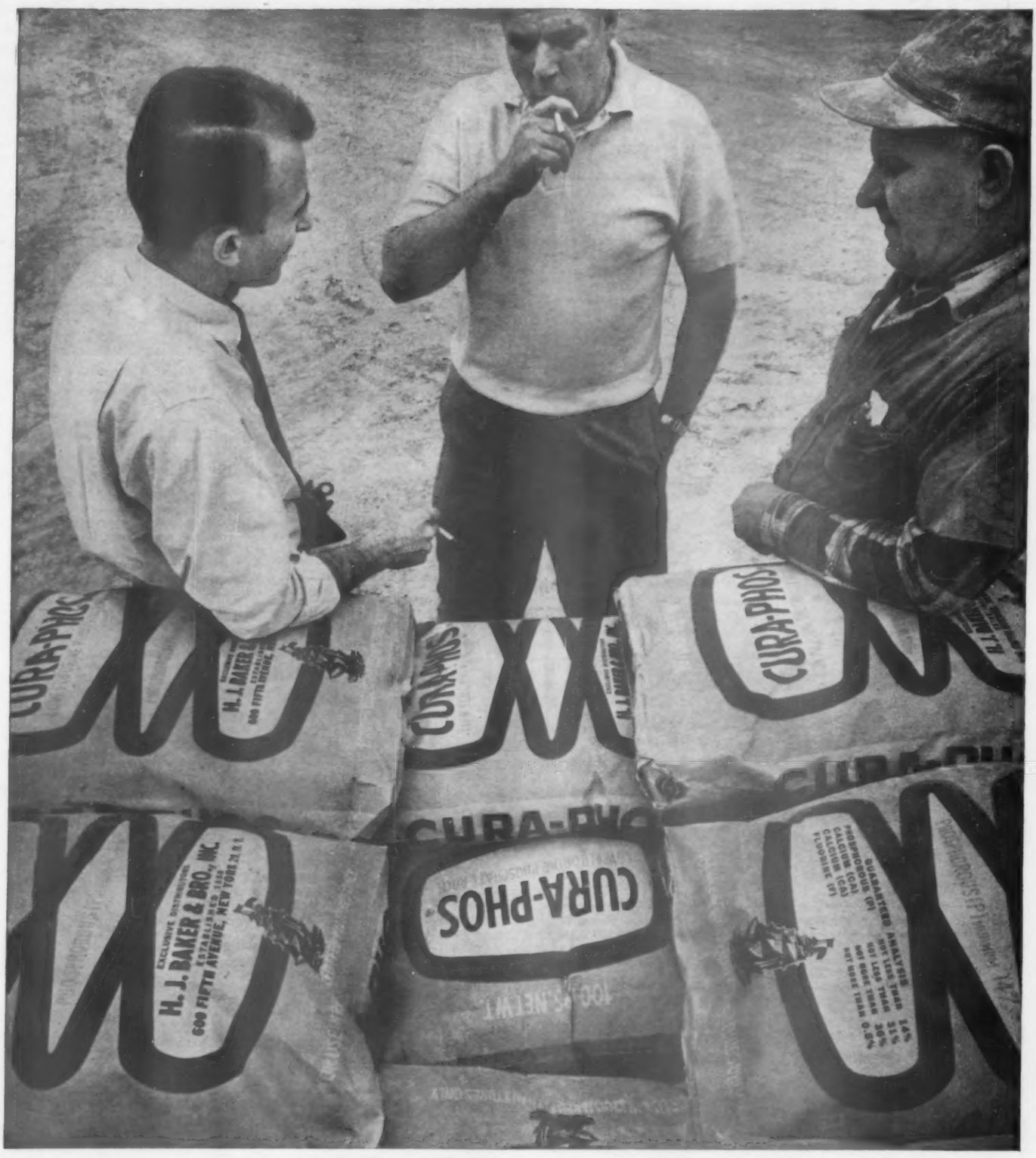

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High Level Grain Feeding For Dairy Cows

By Dr. Carl F. Huffman
Michigan State University

Our interest in the more liberal grain feeding of good cows was prompted by the field observations of Donald Hillman of the Michigan State University dairy department, noting that many inherently high milk producing cows were underfed on energy. This is the case, despite the fact that the revolution in corn production, due to the use of hybrid corn, and better fertilization and cultural practices, has made possible cheaper sources of nutrients than roughages on many farms.

Lassiter (22) has calculated the relative yields and cost of TDN in some common feedstuffs as shown in Table 1.

A part of the failure to feed sufficient grain was due to insufficient grain consumption in the milking parlor. Also, many dairymen are reluctant to feed high levels of grain because of the belief that such a practice aggravates mastitis and udder edema and tends to produce "off-feed." They are also concerned about the possibility of feeding more grain than is profitable because of the belief in the law of diminishing returns which applies in the case with poor producers.

In this report some of the road blocks to higher grain feeding to good cows will be briefly reviewed.

Eckles defined a good cow, as one capable of consuming a large quantity of feed in excess of her maintenance requirement and of using this feed for milk production.

EDITOR'S NOTE: The accompanying article should be "must" reading for any feed man in the dairy feed business. The information was presented by Dr. Huffman, research professor in the dairy department at Michigan State University, East Lansing, as part of a symposium on modern dairy cattle feeding programs at the American Dairy Science Assn. meeting. Dr. S. H. Morrison, who conducts the "Putting Research to Work" department in Feedstuffs, reviewed the reports at the meeting, and he called Dr. Huffman's presentation one of the most thoroughgoing reviews on the subject available. This article is the text of the paper presented by the noted Michigan scientist.

Dr. C. F. Huffman
Michigan State University

EFFECT OF HIGH GRAIN FEEDING ON HEALTH

Mastitis—

High protein concentrates—Moore (27) of Mississippi in 1914 reported that the feeding of 5 lb. of cottonseed meal per cow daily in a lot of five cows, produced more garget than in the controls. Most of the investigations with high protein concentrate feeding have failed to incriminate high protein as a factor in causing mastitis. Huffman and Moore (15) fed five cows cottonseed meal and five cows linseed meal at levels of 5 to 12 lb. per cow daily over a six month period using bacterial counts on incubated plates and failed to show that these protein concentrates aggravated mastitis.

Huffman and Moore fed up to 17 lb. of 43% protein cottonseed meal per day to cows at the peak of lactation. Usually when cows were consuming 17 lb. of cottonseed meal, they were also fed about 13 lb. of corn daily. These data are shown in Table 2.

Similar results were reported by Kuhlman (20) of Oklahoma who fed 6 to 10 lb. of cottonseed meal per cow daily.

Hotis et al. (13) used cows with a history of mastitis. They concluded that the feeding of cottonseed meal (5 to 10 lb. per cow daily) did not aggravate udder conditions nor force cows subject to chronic attacks of mastitis into clinical cases.

Although Frost (7) claimed that when protein feeds were fed to slightly infected herds, many of the animals soon came down with mastitis, he was unable to produce mastitis in a cow fed cottonseed meal as the

TABLE 1. Total Yield of Digestible Nutrients Per Acre and Cost of TDN Per 100 lb. (22)

	Yield/A	Cost/T	TDN per acre lb.	Cost of 100 pounds TDN dollars
Alfalfa-brome hay	3.6 ton	@ $20.00	3,600	2.00
Hay crop silage	12 ton	@ $ 6.33	4,000	1.92
Corn silage	15 ton	@ $ 7.00	6,000	1.75
Ear corn	75 bu.	@ $ .85	4,000	1.51
Shelled corn	75 bu.	@ $ .85	3,350	1.90
Oat grain	60 bu.	@ $ .56	1,344	2.57

TABLE 2. Effect of Heavy Grain (High Protein) Feeding on Health of Milking Cows (Unpublished Data. Mich. Agr. Expt.)

Cow No.	Lact.	Wt., lb.	Av./da. grain high month lb.	High month	Av./da. for 305 da. lact.	Cow No.	Lact.	Wt., lb.	Av./da. grain high month lb.	Month	Av./da. for lact., lb.
G 1	1	981	19.1	2	15.0	G 7	1	866	14.0	4	11.9
	2	1,138	22.3	3	17.3		2	993	23.0	3	15.3
	3	1,178	20.3	2	19.4		3	978	21.0	3	16.9
	4	1,245	24.1	2	18.3		4	1,072	22.9	2	20.0
	5	1,364	29.1	3	24.4						
G 3	1	876	23.8	2	20.0			Second Generation			
	2	963	23.1	2	15.9	G 15	1	807	14.6	2	11.0
	3	1,154	27.6	3	22.8		2	946	20.1	2	16.8
	4	1,165	25.9	3	19.4		3	1,167	27.0	4	20.8
	5	1,188	30.7	2	21.5						
C 9	1	893	19.0	4	18.7			Third Generation			
	2	1,162	22.5	5	17.2	G 33	1	916	23.0	5	20.0
	3	1,093	29.0	3	20.4		2	1,135	25.6	5	22.1
	4	1,047	28.0	4	20.0		3*	1,119	28.4	5	16.8
							4†	1,132	21.5	5	15.7

*Alfalfa, corn silage, corn and cottonseed meal.
†Alfalfa, corn silage and corn.

TABLE 3. Arrangement of Data by Ross et al. (31)

Group No.	No. of cows	Class	FCM	Total grain	Total hay	TDN in hay	TDN in hay + lb. gr.	FCM lb. feed	Feed cost	Value of milk	Value of milk above feed cost
			lb.	lb.	lb.	lb.	lb.	lb.	$	$	$
1	21	2,500- 3,500	2,896	1,437	2,564	1,282	2,719	1.07	61.57	115.84	54.27
2	79	3,500- 4,500	3,848	1,809	2,651	1,326	3,135	1.23	71.74	153.92	82.18
3	183	4,500- 5,500	4,761	2,122	2,968	1,484	3,606	1.32	82.73	190.44	107.71
4	254	5,500- 6,500	5,670	2,378	3,253	1,627	4,005	1.42	91.98	*226.80	134.82
5	309	6,500- 7,500	6,592	2,611	3,397	1,699	4,310	1.53	99.25	263.68	164.43
6	266	7,500- 8,500	7,374	2,870	3,629	1,815	4,685	1.57	108.04	294.96	186.92
7	221	8,500- 9,500	8,284	3,109	3,663	1,832	4,941	1.68	114.36	331.36	217.00
8	137	9,500-10,500	9,044	3,441	3,715	1,858	5,299	1.71	123.18	361.76	238.58
9	76	10,500-11,500	9,938	3,698	3,521	1,761	5,459	1.82	127.66	397.52	269.86
10	33	11,500-12,500	10,689	3,915	3,332	1,666	5,581	1.92	131.20	427.56	296.36
11	19	12,500-13,500	11,514	4,627	3,842	1,921	6,584	1.76	154.10	460.56	306.46
12	4	13,500-14,500	12,270	3,568	3,285	1,643	5,211	2.35	122.05	490.80	368.75
13	1	14,500-15,500	14,000	5,486	3,617	1,809	7,295	1.92	173.32	560.00	386.68

TABLE 4. Relation Between Milk Production and Feed Intake (33)

Cows No.	FCM	Total hay	TDN in hay	Total grain	TDN in forage + grain	FCM lb. feed	Feed cost	Value of milk	Value of milk above feed cost
	lb.	lb.	lb.	lb.	lb.	lb.	$	$	$
4	14,116	5,877	2,939	8,394	11,333	1.25	268.62	564.64	296.02
10	15,466	5,818	2,909	8,544	11,453	1.35	271.78	618.64	346.86
7	17,283	6,204	3,102	9,585	12,687	1.36	301.67	691.32	389.65
7	18,658	6,072	3,036	9,715	12,751	1.46	303.60	746.32	442.72
10	20,098	6,033	3,017	9,794	12,811	1.57	305.18	803.92	498.74
4	21,459	5,898	2,949	9,544	12,493	1.72	297.58	858.36	560.78
4	23,013	6,245	3,123	10,619	13,742	1.68	327.93	920.52	592.59

TABLE 5. Comparison of Herd and Test Conditions (35)

Cow No.	Weight	FCM	Total grain	TDN	FCM lb. TDN	Value of milk	Feed cost	Value of milk above feed cost
	lb.	lb.	lb.	lb.	lb.	$	$	$
50 Test	1,157	14,080	8,112	9,479	1.49	563.74	253.81	309.63
Herd	1,135	11,375	8,171	9,354	1.21	455.00	259.51	240.72
51 Test	1,163	16,065	6,727	8,058	1.99	642.60	232.39	410.22
Herd	1,207	11,466	5,754	6,476	1.74	457.80	189.90	267.90
82 Test	986	10,218	6,367	7,591	1.35	408.72	220.04	188.67
Herd	1,009	10,558	5,599	6,457	1.64	422.32	188.52	233.80
Test	1,226	17,496	9,647	10,225	1.71	699.84	309.84	355.47
88 Herd	970	7,021	3,968	4,630	1.55	280.84	131.92	148.92
Test	1,104	11,892	6,576	7,557	1.57	475.68	220.42	255.26
91 Test	1,172	15,332	7,754	8,807	1.74	613.28	258.04	419.43
Herd	1,247	7,607	4,216	5,854	1.29	304.28	163.43	46.24
94 Test	1,044	13,187	7,718	9,257	1.42	527.48	257.27	269.86
Herd	1,148	10,799	4,977	6,770	1.60	431.96	188.79	243.17
Test	1,310	18,848	9,267	9,820	1.92	753.92	280.49	473.51
199 Test		17,355	8,089	9,544	1.82	694.20	261.98	432.02
Herd	1,212	12,836	6,739	7,146	1.80	513.44	234.29	280.17

TABLE 6. Michigan DHIA Data for 1958, Grain Fed at Four Levels of Milk Production (11) (12)

Milk production	Grain per cow	Feed cost	Returns above feed cost	Returns per $1 feed cost
lb.	lb.	$	$	$
14,727	4,703	201	438	3.18
12,689	3,783	170	357	3.10
10,229	2,910	156	269	2.73
7,345	2,154	135	157	2.16

TABLE 7. Relation of Level of Production to Cost of Feed and Return Above Feed Cost* (28)

—Average yield— Milk	Fat	Value of milk	Cost of concentrates	Total Cost of feed	Return above feed cost	Feed cost per 100 lb. of milk
lb.	lb.	$	$	$	$	$
5,073	204	199	55	110	89	2.17
7,390	301	292	69	127	165	1.72
8,545	349	338	76	136	202	1.59
9,648	399	383	83	144	239	1.49
10,784	446	429	89	153	276	1.42
12,048	496	478	98	164	314	1.36
13,276	546	521	103	170	351	1.28
14,150	594	568	112	181	387	1.28
15,486	644	634	120	194	440	1.25
17,085	694	666	128	206	460	1.21
17,691	752	724	150	226	498	1.28

*Based on the records of 29,442 DHIA cows that completed a full 12-month testing period in 1946.

TABLE 8. Effect of Level of Grain Feeding on Efficiency of Milk Production Above Feed Costs (34)*

Cow	Lact.	Weight	Rough-age	Conc.	TDN	FCM	FCM lb. TDN	Feed cost	Value of milk	Value of milk above feed cost
		lb.	lb.	lb.	lb.	lb.	lb.	$	$	$
A4	2	1,143	11,639	2,034	6,629	8,394	1.27	167	336	168
	3	1,240	10,695	3,495	7,667	10,807	1.41	194	432	238
	4	1,257	12,630	2,074	7,705	7,173	.93	178	287	107
A5	3	1,265	11,056	4,706	8,085	11,643	1.44	228	465	237
	4	1,219	13,740	1,937	7,480	10,054	1.34	186	402	216
	5	1,351	10,171	6,154	9,459	15,745	1.66	236	630	374
	6	1,363	13,757	54	6,479	8,026	1.24	139	321	182
	7	1,197	13,030	225	6,643	7,463	1.12	136	299	163
	8	1,245	9,459	4,065	7,416	10,135	1.37	196	405	209
A6	3	1,070	12,528	657	6,191	7,573	1.22	142	302	161
	4	1,027	10,557	3,547	7,747	10,486	1.35	194	419	225
	5	1,231	12,308	5,846	10,087	15,890	1.58	269	636	366
	6	1,207	9,478	3,061	9,228	14,054	1.52	171	562	391
A14	2	1,252	12,314	5,017	9,337	14,689	1.57	249	588	339
	3	1,284	12,262	5,362	9,509	15,324	1.61	257	613	356
	4	1,388	12,347	4,643	8,987	13,752	1.53	240	550	311
	5	1,309	15,082	153	7,983	7,566	.95	165	303	138
	6	1,339	10,527	659	8,334	11,453	1.37	222	458	236
A15	3	1,096	12,733	341	8,735	7,447	.88	136	298	162
	4	1,191	11,095	3,295	7,714	9,993	1.30	193	399	206
	5	1,150	11,417	887	7,968	6,977	1.00	136	279	142
	6	1,256	12,972	4,028	8,849	11,804	1.33	230	472	242

*Michigan prices: Hay $20 ton; corn silage $5 ton; grain $50 ton; FCM $4/100 lb.

only concentrate nor in another one fed corn gluten meal.

High Grain rations—Moore et al. (26) of West Virginia used 20 milking cows fed grain (high corn) at the rate of 1 lb. for each 3.5 lb. of milk. All animals were fed legume hay, corn silage and pasture in season and managed as a single herd. After continuing the experiment for two years, they concluded, "There appears to be no significant difference in the incidence or severity of mastitis between the group receiving the heavy corn ration and the group fed a normal ration, as fed in this experiment." In further studies, these investigators could find no difference in the incidence or severity of mastitis when first calf heifers were fed the above control rations at the rate of 1 lb. per 3.5 lb. of milk compared to a low level of grain.

Gardner (8) of the University of Illinois reported that none of the following rations increased the incidence or severity of mastitis: (a) corn grain and corn silage, (b) corn grain, corn silage and urea, (c) corn grain, corn silage and alfalfa hay, (d) corn grain, oats, soybean oil meal and wheat bran. In rations (a) and (b) 15 to 25 lb. of corn grain was fed daily for about one year, and in ration (c) about 70% of the nutrients came from the corn plant.

In England, MacPherson (24) investigated 24 herds and classified 13 herds as having a low incidence of mastitis and a high plane of nutrition. Herd management was also better.

Charron (5) of GLF studied the effects of higher grain feeding on 48 dairy farms in New York and New Jersey. The results were based on 442 cows paired as equally as possible during a two-week standardization period under normal conditions. During a 10-week test period one cow of each pair was fed the normal amount of feed and the paired mate was increased in concentrates to 2 lb. per 100 lb. of body weight. Clinical examination of the udders and milk of 207 control and test cows showed that of the cows examined, only 38% showed clinically normal udders at the initial examination. The data did not show that grain feeding resulted in more udder infection but that the incidence of infection was somewhat reduced on the high

Relative Incidence of Health Problems During the Test Period Reported by Supervisor

Problem	—Incidence— of occurrence Control	High T.D.N.	No. of Cows Control	High T.D.N.	% of Cows Control	High T.D.N.
1. Mastitis	24	14	18	12	8	5
2. Winter dysentery	13	11	13	11	6	5
3. Knee, leg or hoof injury	6	3	6	3	3	1
4. Teat injury	4	7	4	7	2	3
5. Ketosis, acetonemia	4	8	4	6	2	4
6. Off feed	3	8	3	8	1	4
7. Scours	2	1	2	1	Less than 1	Less than 1
8. Hardware	2	1	2	1	Less than 1	Less than 1
9. Heat (problem)	2	3	2	3	Less than 1	1
10. Kidney infection	2	0	2	0	Less than 1	0
11. Leaker	1	2	1	2	Less than 1	Less than 1
12. Sick	1	1	1	1	Less than 1	Less than 1

From: E. C. Charron—Higher T.D.N. Feeding of Dairy Cows; Cooperative G.L.F. Exchange, Ithaca, N.Y.; 1960.

Notes:

1. Data from a field study involving 442 paired Holstein cows on 48 farms.
2. Controls received regular rate of grain (normally 12-16 lb. per day). High T.D.N. cows—grain was increased to 2% of body weight during the ten-week testing period.
3. Cows were examined by local veterinarians at beginning and end of trial. Final examination and laboratory test of milk samples for 207 cows showed that higher grain fed cows had 3% more normal udders and 12% less streptococcus infection in clinically normal udders than the control cows.

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ELANCO **REPORT TO THE FEED INDUSTRY**

Now...Hygromix

new in-feed way to control large roundworms, cecal worms, intestinal capillaria worms in poultry

Hygromix kills worms of all ages and sizes. Stops them from producing eggs. Controls worm infections in laying, broiler, replacement flocks. Helps increase feed efficiency, improve flock health.

Hygromix, a new concept in worm control, was first introduced to the feed industry four years ago. At that time, additional research was being conducted to determine if the active component of Hygromix (Hygromycin B) would be useful for control of worms in all classes of livestock or poultry.

The result: Hygromix for poultry.

Hygromix kills and controls three important worm parasites of chickens . . . safely, automatically.

HYGROMIX... ONLY METHOD WHICH STOPS WORM EGG PRODUCTION

Hygromix breaks the life cycle of roundworms, cecal worms, and capillaria worms. Besides killing the adult worm before it has a chance to inflict heavy internal damage, Hygromix also stops worm egg production and reduces the total number of worm eggs that would otherwise infest all poultry premises. The cecal worm egg, for example, can survive for a period of eight months in the soil under natural climatic conditions.

Now, Hygromix for poultry opens up another important service and selling opportunity for feed manufacturers. It is the first, and only, worm-control method which is effective both as a preventive and a cure.

LET'S LOOK AT THE ACTUAL DAMAGE CAUSED BY THESE THREE PARASITES

Briefly, the cecal worm causes general unthriftiness, and in young birds death may result from heavy infection. The cecal worm is also the carrier of blackhead disease. Capillaria worms cause unthriftiness, weakness, loss of weight, and loss of egg production in layers. Large roundworms retard growth of young birds and lower production of laying flocks.

Just how much "dollar damage" is done by worms directly or indirectly, no one seems to know—but Drs. Card, Barger, and Pomeroy, noted poultry scientists, state: "Diseases and parasites continue to exact an annual toll from the poultry industry which has been estimated at more than $250,000,000." (Source: Fifth Edition, "Diseases and Parasites of Poultry.")

The very nature of the poultry industry today has opened the door for even heavier losses. It is an economic necessity for the poultryman to raise large numbers of birds in close, confined areas—and these crowded conditions provide ideal environments for worm eggs, infection, reinfection.

Hygromix helps to lick this problem by providing continuous, automatic worm control during its recommended feeding period.

ADVANTAGES OF HYGROMIX TO POULTRYMEN

Many of the benefits of using feeds with Hygromix are the same for egg producers, replacement growers and broiler operators. This list gives you the complete story at a glance.

HYGROMIX FOR POULTRY:

- helps to improve feed efficiency
- provides way to keep litter free of worm eggs
- safe, economical, easy to use
- birds stay on feed—there's no setback or shock
- helps to prevent blackhead disease by killing and controlling its main carrier, the cecal worm
- big aid to sanitation—lessens chance of next brood being infected—birds are free of worms when ready for laying house
- keeps birds on range free of worms
- helps remove stress conditions and improves flock health.

Commercial poultrymen are concentrating their efforts more and more on sound management and sanitation methods to increase feed efficiency and lower costs of production. Hygromix will help them do this.

ADVANTAGES OF HYGROMIX TO FEED MANUFACTURERS

Volume, volume, more volume seems to be the answer for poultrymen to make a profit today. With this volume, the risk of worm damage, infectious diseases, and the resulting losses becomes that much greater. Up to now, little could be done to solve the poultry-parasite problem.

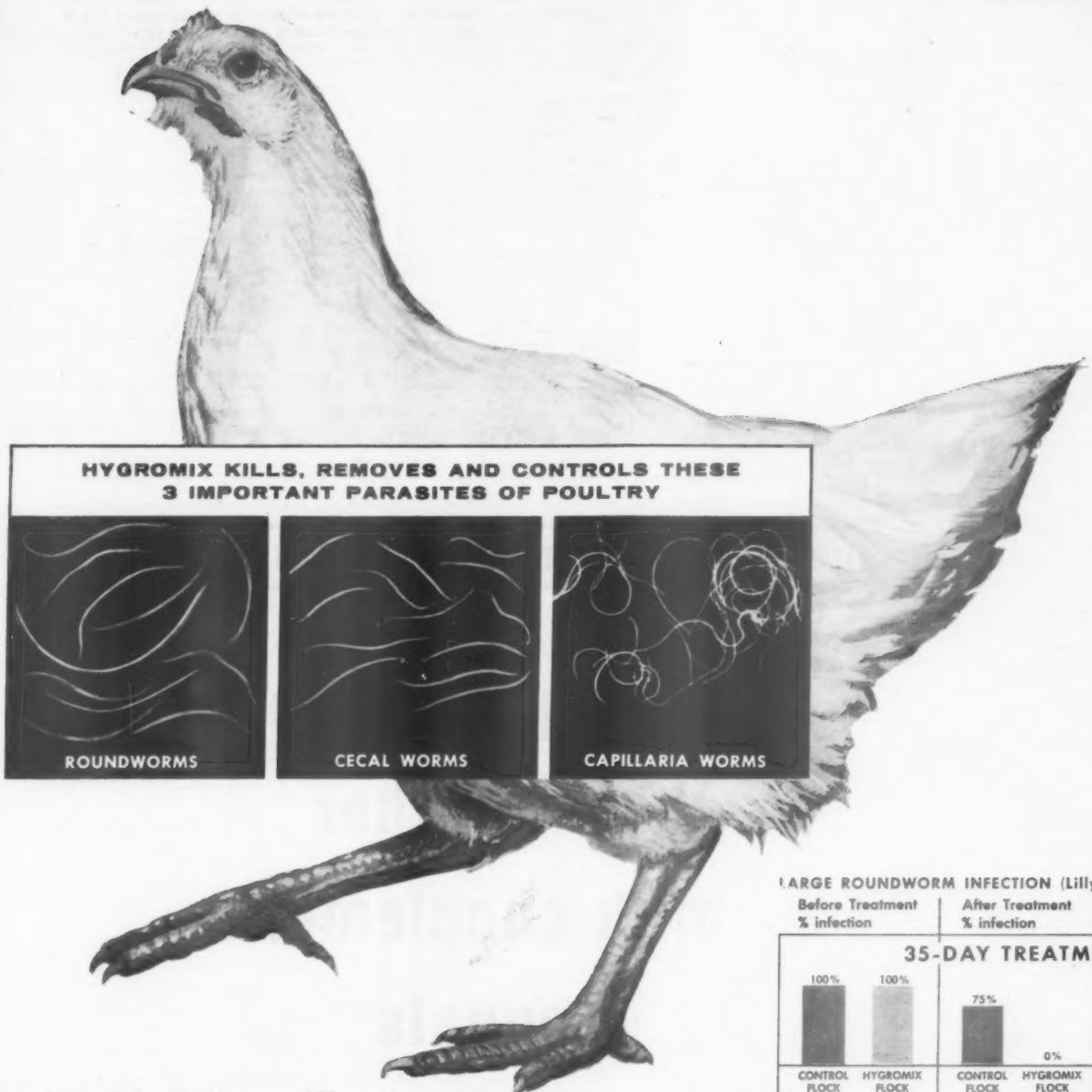
Now, Hygromix not only kills and removes the three most important parasites of poultry but actually breaks the life cycle of these worms—*greatly reduces chances for reinfection.* Now, you can offer poultrymen a brand-new tool to help them increase feed efficiency and lower cost of production.

With Hygromix, your sales and dealer organization can offer commercial poultrymen this newest advance in poultry feeding and build poultry-feed tonnage.

Hygromix is a finely divided and free-flowing premix, designed for accurate and efficient mixing by the feed manufacturer into his complete poultry rations. Hygromix may also be included in your poultry concentrates that are mixed with grain.

HOW TO USE FEEDS WITH HYGROMIX TO PROTECT POULTRY AGAINST WORM DAMAGE

Replacement flocks—Feed 8 grams of Hygromix per ton of complete feed for a period of eight weeks prior to placing birds in clean laying house. Repeat if necessary.



Laying flocks—Feed 8 grams of Hygromix per ton of complete feed for a period of eight weeks. Repeat if necessary.

Broilers—Feed 8 grams of Hygromix per ton of complete feed for the first eight weeks.

HOW TO QUALIFY

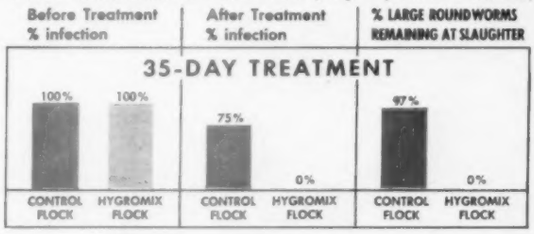
Elanco Products Company is now ready to help you comply with regulations covering the use of Hygromix in your poultry feeds. For instructions, write Elanco Products Company . . . or see your Elanco Representative. The benefits of Hygromix will be explained to poultrymen in the coming months. Act now and be ready.

* * *

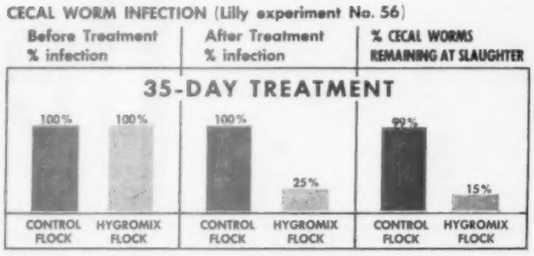
Only proved facts about Hygromix are presented on these pages. Tests are still being conducted at many research centers and preliminary findings indicate that Hygromix will provide benefits beyond those already proved.

These additional benefits will be reported in trade journals and farm magazines as soon as they are thoroughly proved and tested under practical farm conditions.

LARGE ROUNDWORM INFECTION (Lilly experiment No. 56)



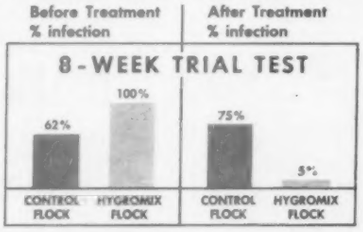
CECAL WORM INFECTION (Lilly experiment No. 56)



Results of worm-control tests at Lilly Research Center: These charts show how feed with Hygromix quickly reduced the number of roundworms and cecal worms, as well as killing the worms. In these experiments, birds with known worm infestation were split into two comparable groups. The control flock received a high-quality poultry ration. The test flock received the same ration with Hygromix. Daily worm counts in the manure were made and recorded during the 35-day test. At the end of the test, all birds were slaughtered and complete worm counts performed. These are shown by "percentage of worms remaining at slaughter."

Results of worm-control test by Dr. M. N. Frazier, Extension Veterinarian, Poultry Department of Animal Disease, University of Connecticut, Storrs, Connecticut: This chart shows how feed with Hygromix quickly reduced the number of capillaria worms, as well as killing them. In this experiment, a total of 1,970 White Leghorns were fed Hygromix mixed in the mash at the rate of 8 grams per ton for a period of 8 weeks; 793 White Leghorns served as controls. One percent of each lot was slaughtered every two weeks throughout the trial and the presence of capillaria worms was recorded.

CAPILLARIA WORM INFECTION (Field Trial No. 1 - Frazier)



HYGROMIX®

(Hygromycin-B)

ELANCO

Makers of **HYGROMIX®** (Hygromycin B) • **STILBOSOL®** (diethylstilbestrol premix)
Micro-Pen® (special coated procaine penicillin G) • **Streptomycin Sulfate**

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grain feeding as compared with the control group.

Edema of the udder—Greenhalgh and Gardner (9) reported that feeding grain up to 9 lb. per day per heifer and up to 12 lb. per cow per day for about a six-week period before calving gave no evidence that grain feeding increased edema of the udder. Similar results were obtained by Hemken et al. (10). The feeding of 16 to 18 lb. of concentrates per day for 40 to 50 days before calving and until swelling disappeared did not increase the amount of udder edema. Similar results were reported by Hathaway et al. (16).

Schmidt and Schultz (32) fed one group of cows no grain, a second group received 6 lb. daily and a third group received 15 lb. of grain per day during the eight-week dry period. The cows were fed 10 lb. of grain on the day after calving and the amount was increased 1 lb. daily until the cows received the amount of grain warranted by their milk production. Heavy grain feeding before and after calving did not appear to increase the severity of udder edema. Similar results were reported by Fountaine (6).

According to Nevens (29) the self feeding of eight dairy cows for periods of 15-130 weeks indicated that the method is not harmful to the health of cows providing that they are gradually accustomed to it. The 22 cows which were used in an unlimited grain feeding experiment by Borland et al. (2) remained in good health with no more digestive, breeding or udder troubles than the cows on a low level of grain feeding. The average daily grain consumption was 24.6 lb. through the lactation periods. Some cows readily ate 35 lb. or more of grain daily during the peak of milk production.

According to Jensen et al. (18) in their two year study, udder troubles were more prevalent in the highest fed group, but there was no difference among the other five groups. Udder troubles were not excessive. The level of feeding had no effect on reproductive failures. There was a definite trend upward in the number of cases of "off feed" as the level of feeding increased. Very few of these cases were serious. Cows that were fed all the grain they would eat sometimes went "off feed" once or twice and, thereafter, avoided overeating.

The results of many experiments show that the occurrence of mastitis and udder edema is not due to heavy grain feeding.

GREATER PROFITS ABOVE FEED COST DUE TO INCREASED GRAIN FEEDING TO GOOD COWS—The main objective of cow testing associations is to enable the dairymen to cull unprofitable cows. Our approach to the effect of higher grain feeding on economic efficiency of milk production is identical with the cow testing concept. The following prices were used: Hay $20/T; grain $50/T, and milk $4 cwt. The corn grain (14% corn) and hay equivalent in corn silage was estimated by multiplying by 0.13 and 0.20, respectively (14).

In order to evaluate the effects of increased grain feeding on the economics of milk production it is necessary to consider the cow as an individual or arrange the groups of cows on the basis of different levels of milk production. Ross et al. (31) of the University of Illinois in 1923 used such an arrangement as shown in Table 3. These investigators took the results of 15 cow testing associations and separated the cows according to the level of production, from a low of 2,500 to 3,500 lb. of milk yearly to high production of 16,500-17,500 lb. of milk per year. The authors as a result of this study stated "feeding for maximum production is subject to the economic law of increasing costs, while increasing the potential ability for high production is subject to the law of decreasing costs."

The data in Table 4 also illustrate this method from the data supplied to Turner (33) by the Illinois testing plant at Dixon, Ill. In this table the value of milk above feed costs ranged from $296 at 14,116 lb., to $592.59 at 23,013 lb. of FCM. Concentrate feeding ranged from 8,394 to 10,619 lb. per year. Turner (33) pointed out that the economic law of diminishing returns may operate with average or poor cows that are fed above their requirements, but it did not operate with good producing cows. He found that the milk production per pound of grain increased as the yearly milk production increased.

In an early study, Woodward (35) compared the same cows when yearly milk records were produced under test cow conditions with their performance under ordinary herd conditions. The results are shown in Table 5. The cows showed greater return above feed costs when under ideal conditions than when kept under herd conditions, except cow 82 for the first lactation as a two-year-old.

Hillman (11) (12) arranged Michigan Dairy Herd Improvement Assn. data into four classes according to milk production. The results are shown in Table 6.

The grain in corn silage is not accounted for in the DHIA records.

TABLE 9. Jensen et al. (18) Data From Four Stations. Cows Fed at Specified Rates of Haecker Standard, Series No. 1 Experiments

Item and unit	Levels 1	2	3	4	5	6
Yearly records, No.	31	28	33	33	16	36
Basic production ability FCM, lb.	8,836	8,892	8,853	8,841	8,833	8,906
Weight, lb.	1,127	1,091	1,095	1,136	1,182	1,212
FCM, lb.	7,558	8,411	8,855	9,999	9,497	11,204
Corn silage, lb.	12,608	12,499	12,049	12,054	12,197	9,960
Grain in, lb.	1,639	1,625	1,566	1,567	1,586	1,248
Hay in, lb.	2,520	2,500	2,410	2,411	2,439	1,920
Grain fed, lb.	1,876	2,583	3,347	4,469	4,533	6,783
Total grain, lb.	3,515	4,208	4,913	6,036	6,119	8,031
Hay, lb.	3,434	3,337	3,422	3,485	3,598	3,678
Total hay, lb.	5,954	5,837	5,832	5,896	6,037	5,598
TDN in hay	2,977	2,919	2,916	2,948	3,019	2,799
TDN in hay & lb. gr.	6,492	7,127	7,829	8,984	9,138	10,830
FCM/lb. feed	1.16	1.18	1.13	1.11	1.04	1.03
Cost of feed, dollars	147.42	163.57	181.15	209.86	213.35	256.76
Value of milk, dollars	302.32	336.44	354.20	399.96	379.88	448.16
Value of milk above feed cost, dollars	154.90	172.87	173.05	190.10	166.53	191.40

The return above feed cost of highest group (14,727 lb. milk) was $438 compared with lowest producing group (7,345 lb. milk) $157.

PREVENTIVE NUTRITION AT ITS BEST

We guarantee
that no other
milk supplement
equals
Peebles' M-N-C
in
biological value
milk mineral and vitamin content
whey factor
keeping quality
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TABLE 10. Data from Delaware Bulletin 248 Used in Jensen et al. (18) Publication

Grain	Yearly records	FCM	Total Grain	Total Hay	TDN in hay	TDN in hay + lb. grain	FCM/ lb. feed
			First Year Records				
1	6	7,581	3,556	6,411	3,206	6,762	1.12
2	5	8,293	5,046	6,647	3,324	8,370	.99
3	5	8,887	5,716	6,904	3,452	9,168	.97
4	4	11,487	6,552	6,981	3,491	10,043	1.14
			Second Year Records				
1	5	8,228	4,495	6,391	3,196	7,691	1.07
2	5	9,844	5,595	6,804	3,402	8,997	1.09
3	4	10,778	6,351	6,514	3,257	9,608	1.12
4	4	12,312	7,867	6,809	3,405	11,272	1.09

Morrison (28) used records of 29,442 DHIA cows to prepare Table 7. The 5,000 lb. milk group had an $89 return above feed cost compared with $489 for the group that averaged 17,691 lb. of milk.

Ward, Chestnut and Huffman (34) assembled MSU data where cows were fed on very low grain, medium grain and high grain rations in different lactations. A limited amount of these data are presented in Table 8. Cow A6 produced 7,573 lb. of FCM during the third lactation when fed low grain (667 lb.); 10,486 lb. during the fourth lactation when she consumed medium grain (3,547 lb.), and 15,890 lb. during the fifth lactation when 5,862 lb. of grain was fed. Values of milk above feed cost for these three lactations were $302, $419 and $636, respectively. These data suggested that the increased returns above feed cost followed increased grain feeding. Similar results are shown for the other cows used in Table 8.

The principle of diminishing returns as applied to milk production is based primarily on the data by Jensen et al. (18). In these investigations large amounts of corn silage were fed. In Table 9 the corn in corn silage was added to the grain fed as such, and the hay equivalent was added to the hay fed as such. In the table the value of milk above feed cost tended to increase with increased grain feeding. No doubt, if the authors had grouped the cows in each level of feeding according to milk production the increase in profits would have been much greater for the high producing cows.

Jensen et al. (18) attempted to group the cows according to the basic producing ability of the cows in one of the tables. The cows from the "low" stations and from the "high" stations were grouped in poor cows and good cows. They state that it should be possible to analyze the data by comparing individual cows while taking full account of the differences in productivity, as measured by "expected" yields based on previous production records, but it is difficult to get such cows for experimental purposes. Jensen et al. (18) were of the opinion that for this reason group comparisons are probably more reliable than individual comparisons. This opinion is not in agreement with the concept of Ross (31) and Turner (33). There is a possibility that Jensen et al. (18) were not familiar with these reports.

TABLE 11. Relationship of "Herd Improvement" Levels of Milk and Feed Input (19)

Milk average	Composite feed intake (conc. equiv.)	Milk/lb. feed intake
lb.	lb.	lb.
6,148	6,300	0.98
7,365	8,300	0.89
8,618	7,900	1.09
9,575	8,300	1.15
10,583	8,600	1.23
11,436	9,400	1.22
12,476	9,400	1.33
13,524	10,200	1.33
14,468	11,300	1.28
16,339	14,400	1.44

Further evidence that increased grain feeding does not depress milk production was pointed out by the work of the Delaware station in Table 10. The value of the milk above cost tended to increase with the rise in the plane of nutrition. These data were included in the bulletin reported by Jensen et al.

Kottke (19) arranged DHIA data according to milk production. As the amount of milk increased the efficiency per pound of feed increased as shown in Table 11.

Lindsey and Archibald (23) conducted a long time experiment with two groups of cows (high and low roughage). The group that received less roughage and more grain produced more milk per year. The cost of milk production of the two groups was about the same.

Charron (5) reported that milk production increased 2,031 lb. per cow due to higher grain feeding. While 90% of the cows responded with extra milk production, 40% of the cows showed increased profit.

Mather et al. (25) found that cows with potential milk production of 8,906 lb. of FCM per 245-day lactation gave 0.58 lb. of FCM per pound of grain; whereas, those with a 245-day potential of 11,708 lb. of FCM gave 1.35 lb. of FCM per pound of grain. The high potential cows showed no evidence of diminishing returns and relatively little for the low potential cows.

The Danish government sponsored a two-year experiment with high pro-

Peebles' M-N-C supplies ideal animal protein balance

Compared to expensive medications, the milk nutrients in Peebles' M-N-C offer an extremely low-cost way to combat stress and disease. *And no immunity can be built against the effectiveness of milk nutrients!* Peebles' M-N-C assures an optimum level of balanced nutrition to prevent rather than cure disease. It builds resistance against stress conditions which cause CRD, for example, and numerous other diseases. Result: improved growth and production at lower cost.

Peebles' M-N-C contains 18% lactalbumin, the preferred protein of milk...far more than is supplied by any other milk product. And it is this protein that provides all 12 essential amino acids, plus a bonus amount of arginine and the sulphur containing amino acids cystine and methionine. When lactalbumin protein is combined with vegetable protein, maximum feeding results are obtained.

TYPICAL COMPARATIVE ANALYSIS OF MILK PRODUCTS

	Peebles' M-N-C	Dried Whole Whey	Dried Buttermilk	Dried Skim Milk
Lactose	50.0%	68.2%	47.8%	50.5%
Protein:				
Lactalbumin	18.0	12.1	5.6	6.1
Casein	0.0	0.0	27.3	29.8
Minerals	14.1	8.5	8.1	7.9
Fat	1.0	0.8	4.7	0.9
Moisture	4.0	4.0	3.9	3.2
Fiber	0.0	0.0	0.0	0.0
Calcium	1.5	0.9	1.3	1.3
Phosphorus	1.0	0.7	1.0	1.0
Potassium	3.0	2.3	0.7	1.5
Sodium	1.5	1.0	0.95	0.3
Riboflavin	24.0 mg/lb	11.0 mg/lb	12.0 mg/lb	9.0 mg/lb
Niacin	8.0 "	5.0 "	5.0 "	6.0 "
Thiamine	2.2 "	1.8 "	1.7 "	1.5 "
Pantothenic Acid	34.0 "	22.0 "	13.0 "	16.0 "
Choline	1900.0 "	1100.0 "	500.0 "	600.0 "
Pyridoxine	2.4 "	1.3 "	0.0 "	3.1 "
Vitamin B_{12}	15.0 mmg/lb	11.8 mmg/lb	0.0 mmg/lb	30.0 mmg/lb
Folic Acid	115.0 "	60.0 "	0.0 "	0.0 "
Biotin	270.0 "	160.0 "	0.0 "	283.0 "

AMINO ACID PERCENTAGES IN M-N-C COMPARED WITH DRIED WHOLE WHEY

	M-N-C	Dried Whole Whey
Arginine	0.59%	0.40%
Glycine	1.04	0.70
Histidine	0.33	0.22
Isoleucine	1.07	0.72
Leucine	1.73	1.16
Lysine	1.49	1.00
Methionine	0.57	0.38
Cystine	0.57	0.38
Phenylalanine	0.72	0.48
Tyrosine	0.76	0.51
Tryptophane	0.36	0.24
Valine	0.94	0.63
Threonine	0.86	0.58
Aspartic Acid	1.57	1.05
Glutamic Acid	2.58	1.73

CONCENTRATED WHEY FACTOR FOR MAXIMUM GROWTH

The active growth stimulant Whey Factor has been isolated in large quantities in the milk fractions that make up M-N-C. And health-promoting milk minerals and milk vitamins are more plentiful in M-N-C than in any other milk product. M-N-C is also spray dried to give it a substantially higher biological value than is possible through roller drying.

LACTOSE IN M-N-C PROVIDES CONSTANT ENERGY

The lactose content of M-N-C is not altered in any way. As a result, it is hydrolyzed slowly as it passes through the intestinal tract and serves as a constant source of energy. And...slow hydrolysis permits the lactose to pass to all parts of the intestines where it serves as food for important, acid-producing bacteria.

The 50% lactose content of M-N-C is almost identical to that of skim milk. It is sufficient to promote a healthy digestive system, yet at a low enough level so as not to induce wet droppings.

And here's another nutritional advantage of importance. Concentrated M-N-C provides 50% more non-lactose nutrients than you get in dried whole whey. Just *two pounds* of M-N-C supplies the same amount of Whey Factor and other milk nutrients as *three pounds* of dried whole whey.

FREE FLOWING, EASY MIXING, ECONOMICAL

Peebles' spray-drying process converts M-N-C into a free-flowing powder that mixes quickly and evenly throughout feeds. And because it is non-hygroscopic, it can be stored for long periods without absorbing moisture. M-N-C is tops in economy, too, because two or three pounds in 100 pounds of feed is sufficient for full, potent benefits!

FILL IN THIS COUPON FOR FULL FACTS ON PEEBLES' M-N-C PLUS LIBERAL FREE PRODUCT SAMPLE

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Please send me complete facts on Peebles' M-N-C.
☐ Include generous free product sample for personal analysis and mixing tests.

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Application_____
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Feed efficiency and egg production, over a 10-month period, were best when 1/3 of the defluorinated phosphate was replaced with soft phosphate.

When 2/3 of the defluorinated phosphate was replaced with soft phosphate the results were about the same as when all the supplemental phosphorus came from defluorinated phosphate alone.

SOFT PHOSPHATE, INC.
media, pennsylvania

A Natural, Research-Proven, Sensibly Priced Phosphate That Has Fortified More Than 100,000,000 Tons of Feed

Different Levels of Grain With High Quality Roughage on Efficiency of Milk Production (N.J. Agr. Expt. Sta. J. Dairy Sci., 43:358. 1960)*

Group	FCM	Hay equiv.	Hay	Grain	Total TDN	FCM/lb. TDN	Feed cost	Value of milk	Value of milk above feed cost	Difference H-0
	lb.	lb.	lb.	lb.	lb.	lb.	$	$	$	$
C 1H	Potential	11,741								
	0 8,221	7,339	3,926	0	3,926	2.09	73.39	328.84	255.45	
	M 9,809	6,670	3,549	1,127	4,676	2.10	107.65	392.36	284.71	
	H 14,249	6,606	3,505	2,969	6,484	2.20	173.94	569.96	396.02	140.57
C 2H	Potential	11,726								
	0 7,454	6,514	3,455	0	3,455	2.16	65.14	298.16	233.02	
	M 10,681	6,798	3,599	1,217	4,816	2.22	112.20	427.24	315.04	
	H 13,267	5,742	3,055	3,095	6,150	2.16	169.87	530.68	360.81	127.79
C 3H	Potential	10,832								
	0 8,365	7,157	3,849	0	3,849	2.17	71.57	334.60	263.03	
	M 11,051	6,517	3,450	1,271	4,721	2.34	111.37	442.04	330.67	
	H 12,568	5,968	3,166	2,804	5,969	2.11	161.58	502.72	341.14	78.11
C 4H	Potential	9,412								
	0 8,263	7,510	3,996	0	3,996	2.07	75.10	330.52	255.42	
	M 8,846	6,642	3,534	1,050	4,584	1.93	104.57	353.84	249.27	
	H 11,745	5,850	3,131	2,544	5,675	2.07	150.93	469.80	318.87	63.45
R 5H	Potential	9,803								
	0 8,185	6,849	3,660	0	3,660	2.24	68.49	327.40	258.91	
	M 8,063	6,380	3,383	941	4,324	1.86	98.00	322.52	224.52	
	H 10,789	6,051	3,484	2,353	5,837	1.85	150.51	431.56	281.05	22.14
R 6H	Potential	8,931								
	0 7,139	7,546	4,072	0	4,072	1.75	75.46	285.56	210.10	
	M 8,016	6,980	3,743	1,011	4,754	1.69	106.55	320.64	214.09	
	H 8,811	6,247	3,376	1,973	5,349	1.65	134.17	352.44	218.27	8.17
R 7G	Potential	8,619								
	0 6,909	6,165	3,285	0	3,285	2.10	61.65	276.36	214.71	
	M 9,136	6,260	3,352	1,053	4,405	2.07	100.88	365.44	264.56	
	H 9,774	6,150	3,285	2,345	5,630	1.74	145.70	390.96	244.26	29.55
R 8G	Potential	7,964								
	0 3,733	5,138	2,722	0	2,722	1.37	51.38	149.32	97.94	
	M 5,538	5,197	2,756	652	3,408	1.63	75.67	221.52	145.85	
	H 6,268	4,966	2,641	1,428	4,069	1.54	101.54	250.72	149.18	51.24

*This table was supplied by Dr. R. E. Mather.

duction cows (21). Two cows with an average production of 607 lb. of butter fat a year were used. These cows were kept under ideal conditions. Each cow was fed according to her production and appetite. At the peak of milk production as much as 40 lb. of concentrates plus 7 lb. of hay, 30 lb. of grass silage and 50 lb. of beet top silage were fed. The results are shown in Table 12.

The cows produced an average of 24,341 lb. of FCM during the first year and 25,622 lb. the second year. The efficiency of feed utilization was high compared with average cows in Denmark.

Brody (3) estimated the caloric efficiency for milk production of Carnation Daisy at about 44%. The maximum possible FCM production of dairy cows was estimated at 50,000 pounds per year (3).

In the investigation of the effects of heavy grain feeding upon the efficiency of milk production, it is necessary to use inherently good cows. Many experiments have been conducted using groups of cows of unknown milk producing potential. The results have been mixed, since it was usually a matter of chance to balance groups in this respect. Recent reviews by Reid (30), Jawetz (17), Burt (4), and Yates (36) cover both the short time and long time experiments upon the economics of feeding dairy cows.

It is apparent from this review that good cows with large appetites and inherently high milk production potential are capable of high levels of economic production. It is necessary, however, to treat the data for such cows as individuals. The liberal grain feeding of good cows will make possible the increased profits to dairy-

(Turn to GRAIN FEEDING, page 71)

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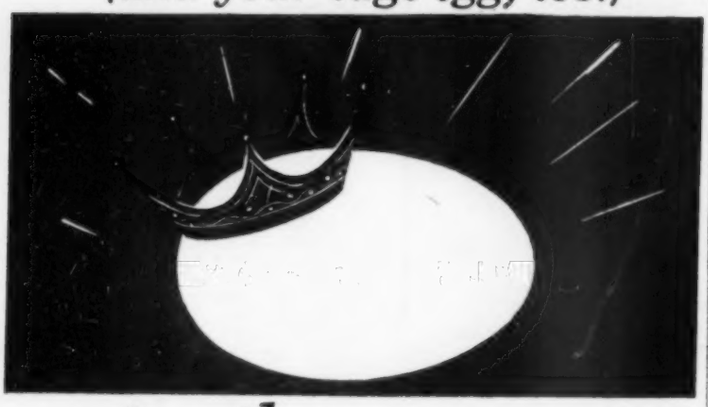

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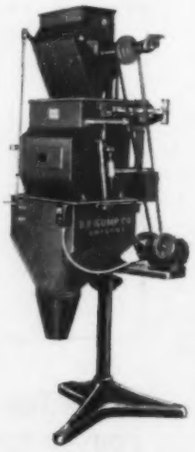

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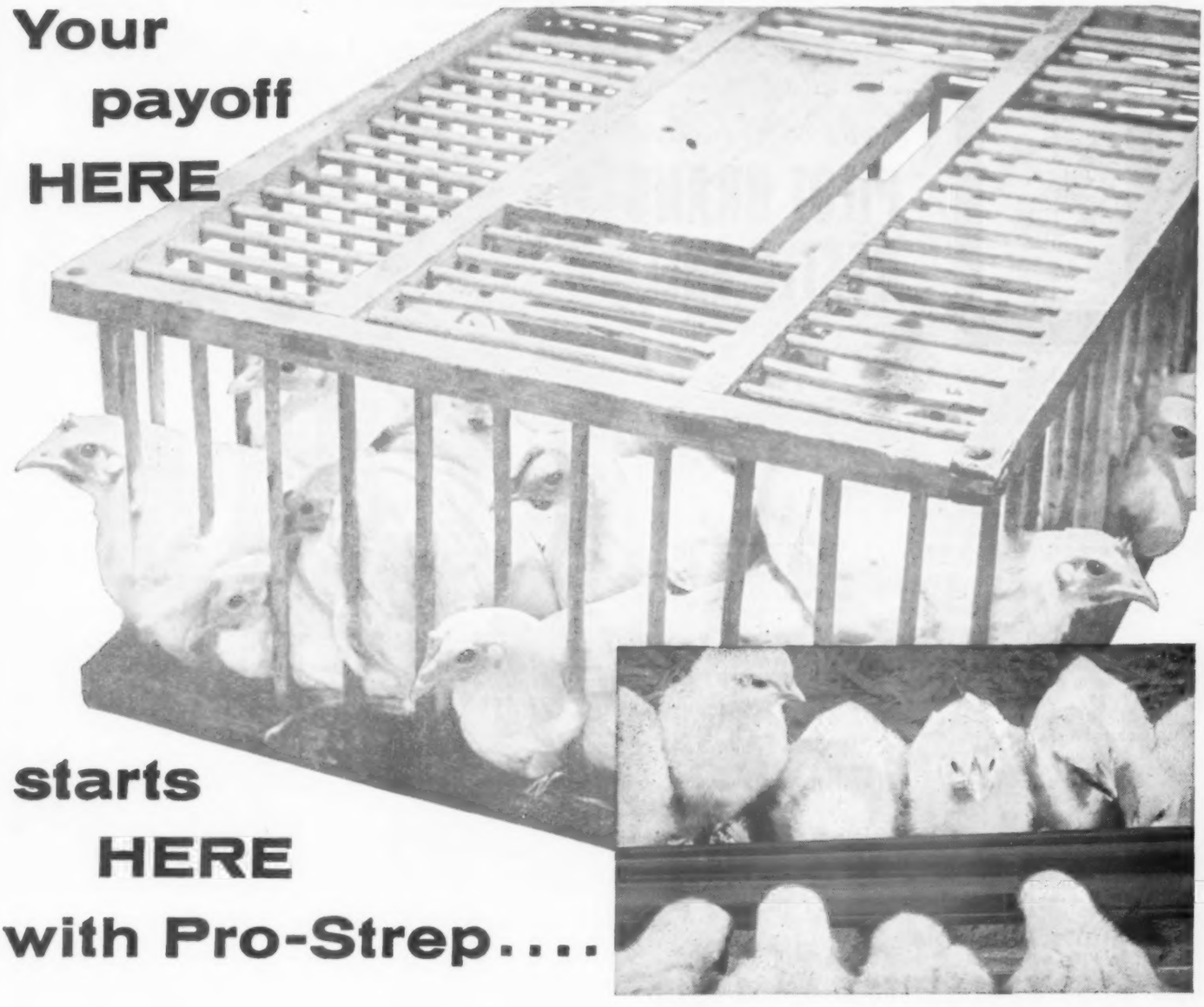

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Wisconsin Feed Man Raises Broilers on Long-Term Basis

By Al P. Nelson
Feedstuffs Special Writer

The raising of broilers by William Parrell, owner of the Black Earth (Wis.) Mill, is no short term project. Mr. Parrell has been raising broilers since 1956, and his profits have paid for a big broiler house and equipment on his land at the edge of town, and the broiler project has also yielded some profit in addition.

Mr. Parrell says that it costs him 13½¢ per pound to raise broilers, counting all costs, and the day this reporter called on him the broiler market was 14¢.

"I raise 8,000 broilers at a time, handling four batches per year," says Mr. Parrell. "It requires one hour labor per day every day in the year to handle the project. The broilers consume 160 tons of feed annually. I have a 4-ton capacity tank at the broiler house, from which feed is augered into the bird raising area."

One advantage which Mr. Parrell gets from his broiler flock work, aside from the direct profits, is that he knows how to handle various disease problems. He has taken a Salsbury course in poultry service and finds this very valuable in operating his feed mill and in winning and holding poultry customers.

"Not only am I able to do my own service work, but the accumulation of experience helps me do a better job for poultry customers on whom I call," Mr. Parrell says. "There are not too many broilers raised in this area, but there is quite a volume of layer flock business, and here is where expert poultry service pays off."

William Parrell (right), owner of Black Earth (Wis.) Mill, talks feed business with a customer.

Customer Confidence; Value of Personal Calls

Mr. Parrell points out, too, that when a feed man has a poultry or beef project on a long term basis, farmers often place more confidence in his feed recommendations. They feel, in many such cases, that the feed man can reinforce his theoretical advice on feeding with practical experience.

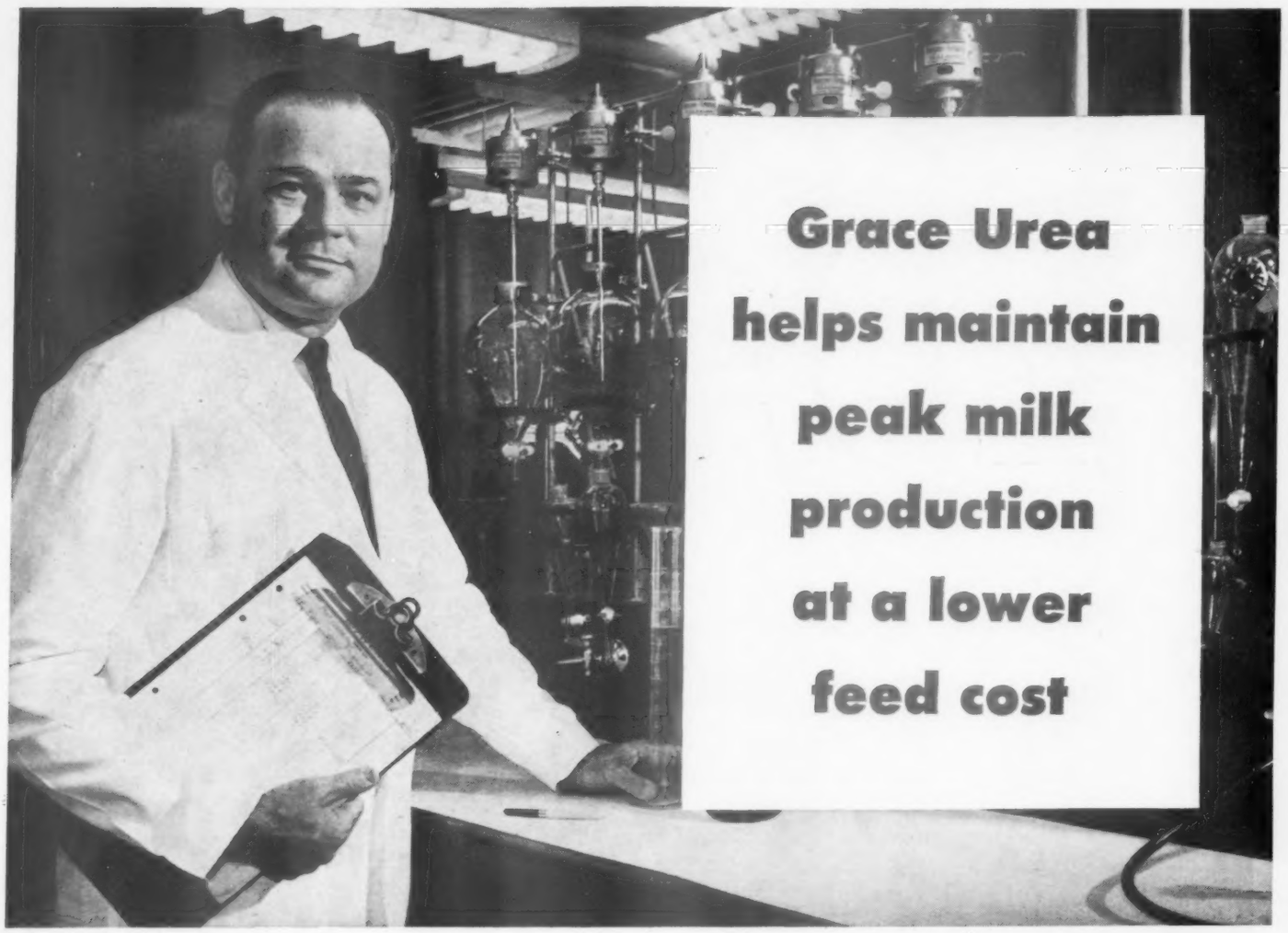
"There is no doubt that this long range broiler project helps me in many ways to get more feed business," says Mr. Parrell.

Mr. Parrell has one man run his mill, and another deliver feed. He himself likes to visit farmers in his area and discuss with them their feeding program and problems. He does not try to make hurried calls. In fact, he will often spend a couple hours or more with one customer going into details about a feeding program.

"I am convinced from results that

Here's a view of the two-story broiler house owned by William Parrell, Black Earth (Wis.) Mill. Mr. Parrell raises 8,000 broilers four times a year. Mr. Parrell feels the project helps to build customer confidence in his firm's feed recommendations.

The Black Earth (Wis.) Mill shown here was built in 1858. Modernized in recent years, it grinds and mixes feed (in about equal proportions) for dairy, hog and poultry producers in the area, says William Parrell, owner.



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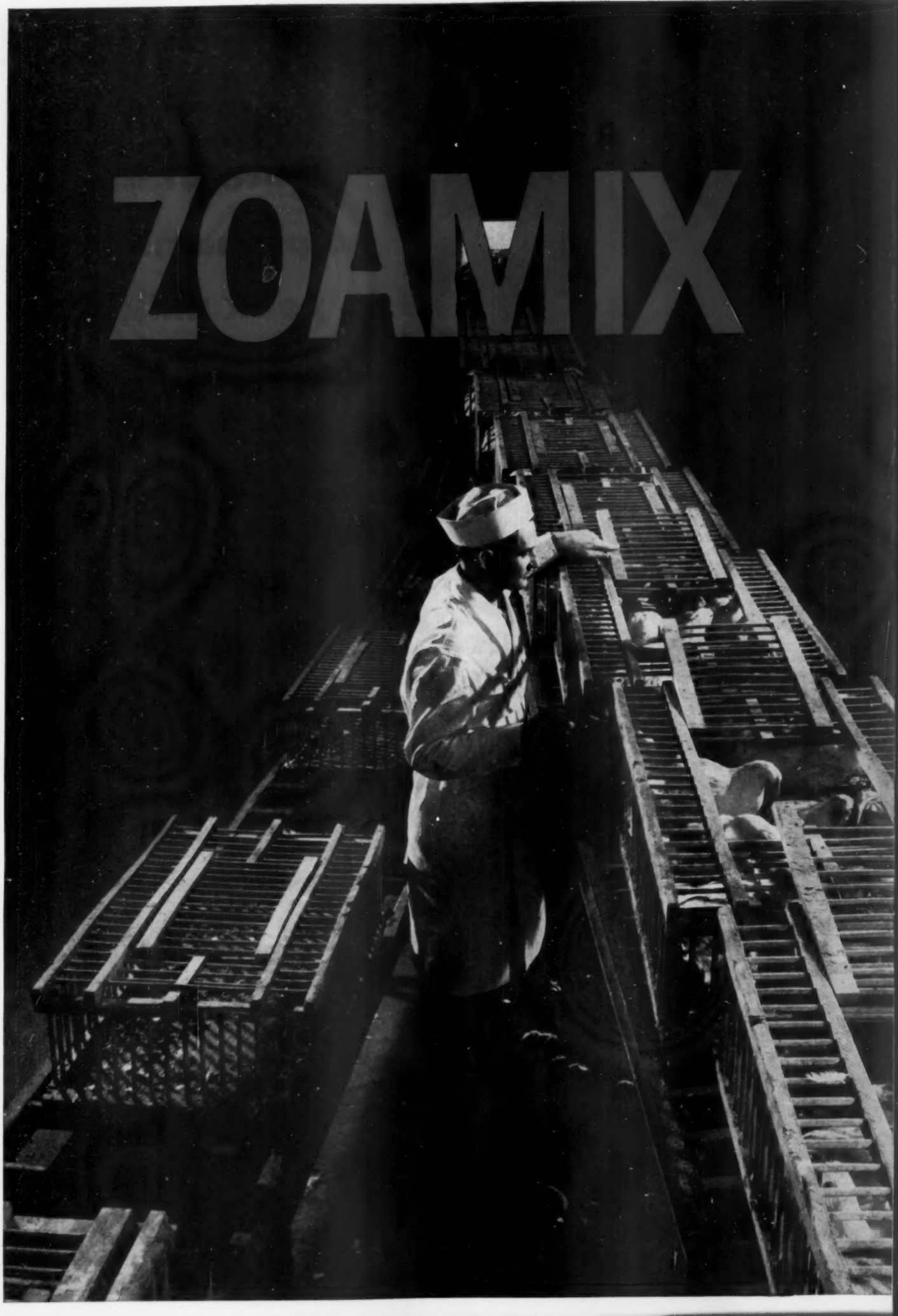
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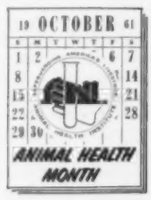

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THE DOW CHEMICAL COMPANY DOW Midland, Michigan

the best way to get new business is to make personal calls on farmers," Mr. Parrell says. "Most of them have heard about my broiler project and ask questions about it. Thus, our conversation usually gets off on a man-to-man basis on a common interest. I don't make more than perhaps 20 calls per month on customers and prospects, but I spend much time with each. Over a year's time I can call on a couple of hundred farmers."

Mr. Parrell says that he has been calling on one customer for seven years. He isn't selling the man any feed, but he does sell him fertilizer and other farm supplies. Some day, he says, he may get the feed account.

"You can't give up too quickly on a prospect," Mr. Parrell explains. "After all, when a farmer shifts to your feeds this may mean a $500 to $1,000 purchase or more per year. Farmers don't shift that quickly. You've got to gain their confidence and work out a program and sell it to them before they'll switch to your feeds. And this may involve many, many calls. I don't worry how often I have to call on a prospect. I'm only concerned with how my program is reaching him, so that eventually he'll buy from us."

Mr. Parrell has a mill which was built in 1858 and modernized in recent years. He has a 15-in. Bryant hammermill and two 1½-ton capacity Kelly-Duplex mixers. He also has a Strong-Scott molasses attachment, a Triumph corn sheller and a 5-ton Pamco auger type bulk truck.

"Our grinding charges are 13¢ for fine feed and 11¢ per cwt. for cow feed," reports Mr. Parrell, "and this includes mixing. We make no charge for corn shelling."

Multiple-Type Feed Sales

This mill owner sells dairy, hog and poultry feeds in about equal proportions. This is excellent dairy country and for this reason molasses equipment is vital.

"By being able to serve three types of farmers with feeds," Mr. Parrell says, "this helps to provide considerable volume every month if we work for it. And our merchandising program is geared to this type of selling. We find out what the farmer wants and then give him that type of service. At the same time, we are always ready to give him our recommended formulas for dairy, hog and poultry feed, if he asks for such advice."

Mr. Parrell's office and farm store space is small, but he has a lot of farm supplies, which are well-displayed on shelves. Many customers who come to the mill to buy feed or to discuss feeding problems or to pay up accounts often see these supply items and make extra purchases.

"Another advantage we find in having a well-stocked farm supply store," says Mr. Parrell, "is that it keeps a farmer in our office area longer. If he sees a product he thinks he can use, he'll ask questions about it. Often, if it's a poultry or livestock remedy, the talk will eventually get around to feed, and so we may get more feed sales too, or be able to impart more information to the customer on how he can utilize the feed he buys from us to greater advantage."

"On the other hand, our soft drink machine showed a tidy profit."

Tells Theme for S.E. Group's '62 Convention

DECATUR, GA.—"Stop, Look and Listen—the business you save may be your own."

This will be the theme of the 1962 Southeastern Poultry & Egg Convention, scheduled to move up to the Mart in Atlanta, Jan. 29-31, according to A. A. Middleton, vice president of the Southeastern Poultry & Egg Assn. and chairman of the 1962 convention program committee.

The program committee, which met in Atlanta, viewed the information desires of people in the industry and set forth a tentative program which will deal in major issues and management know-how.

It was noted that the 1962 convention will move to the modern facilities of Atlanta's new Merchandise Mart, which is located in the heart of the downtown area.

Although the new Mart provides more exhibit space than the auditorium, where the convention has been held for 14 years, booth space is almost sold out, it was reported.

Hotel accommodations are "going fast," it was said, indicating a possible record attendance at the show.

Hog Numbers Increase

OTTAWA—The number of hogs on farms in Canada Sept. 1, estimated at 6,170,000, was 9% greater than the total of 5,637,000 head Sept. 1, 1960. This indicates that moderate expansion has continued during the summer quarter, since June 1 hog numbers were 7% above year-earlier totals. Except for Quebec, however, expansion has been less than was anticipated from data reported at June 1. The slowing down of the expansion in hog production no doubt results from the smaller grain crop in the West and rising feed prices.

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6 of 9 Witnesses At Broiler Hearing Favor Controls

By Special Correspondent

NEOSHO, MO. — A congressional hearing on the chaotic situation in the broiler industry was held Oct. 2 at the Newton County Courthouse, Neosho, with 200 persons in attendance. Chairman of the committee was Rep. Dale Alford (D., Ark.), aided by Rep. Harvey of Indiana and Rep. Avery of Kansas. Also attending was Rep. Hall of Missouri, in whose district the hearing was held.

Six of the nine persons who testified were for some kind of government controls. Representatives of large feed companies and integrators were not present, either as witnesses or observers. Broiler growers who testified were comparatively small, with the largest having 21,000 capacity.

Charles Dixon, hatcheryman, Monett, Mo., testified in behalf of a group of 150 who met Oct. 26 at Cassville, Mo. A vote taken at that meeting of the producers in attendance showed 39 for controls and 22 against.

Mr. Dixon proposed that the government purchase 15% of all broiler breeders hatched February through June of this year, with liquidation being compulsory. He also proposed that there be no new construction or no new growers permitted for broilers and that four broods per year be the limit in present facilities with 1 chick per square foot being the maximum capacity. Enforcement of such controls, he suggested, should be handled by the ASC (Agricultural Stabilization Committee) in each county.

Rep. Alford advised Mr. Dixon that historically, once government controls are imposed, there would be no receding.

Feed Dealer Testifies

John Dunlap, Jr., independent feed dealer, Washburn, Mo., stated that his company was an integrator, financing the complete broiler operation, and prior to June 1 had been paying the grower 2¢ per pound for broilers produced, but after that date had cut the payment to 1¢. He further advised that the company had made no placements since Aug. 14. January and February were profitable months for his organization, but he related that the company lost $57,000 since March 1. When asked what had been the primary cause of this situation, he advised "poor judgment."

Mr. Dunlap proposed that controls be applied to growers in the 22 broiler states that are included in the regularly published group containing statistics and prices. Extension of easy credit through government agencies for broiler housing has been the primary cause of the present problem, according to Mr. Dunlap.

Forest Neve, Jr., egg producer, Lexington, Mo., brought a roar of laughter. Mr. Neve objected to outsiders entering the poultry business and said the superintendent of schools and a dentist in his area had obtained a loan from the Small Business Administration to build a 10,000 bird laying house. Controls, he felt, should be designed to keep these "outsiders" from getting into the industry, and consequently forcing "poultrymen" out. Asked by a member of the committee at what time in life a man should have to decide his vocation, Mr. Neve, with a smile, admitted that he was a registered pharmacist.

Mr. Neve further stated that integrators had "ditched, dammed and drained" the poultry industry.

John Helm, broiler grower, Washburn, Mo., said that growers are already under controls with feed companies. Such companies, he stated, make all the decisions concerning the birds and the grower must go along with such decisions. Mr. Helm said that the broiler grower has never been truly represented in Washington, D.C. He believes that controls are immediately necessary to save the grower.

James Morrow, independent feed manufacturer, accused the government of causing the present chaos. He presented figures for his area to show that the government had furnished "cheap" credit for the construction of the majority of broiler houses, credit not available through local banks. He spoke against controls.

R. J. Tyron, broiler grower, Noel, Mo., stated that all chambers of commerce in the southwest Missouri area indicate a substantial drop in business within the last 60 days due to the plight of the broiler industry. He accused feed companies, large and small, of misleading advertising and declared that the grower is nothing more than a "slave" to them.

Condemnation has also been a leading cause of growers going bankrupt, according to Mr. Tyron. He stated that a federal inspector told him, "You cannot use my name, as it would cost me my job, but we have orders to condemn a certain number of birds, regardless of their quality." He believes that controls should be put at the grower level.

R. J. O'Brien, manager of a small processing plant, Pineville, Mo., agreed with Mr. Morrow on the "cheap" credit money and also stated that there is too much government now. He believes the industry will bail itself out of the present situation.

Robert Casper, Winterset, Iowa, vice president of the National Farmers Organization, said that poultry was being used by the grocery chains to set and reduce prices of red meat, and he implied that there was restraint of trade in the broiler industry and in beef and lamb trading.

Hits Integration

Integration in the broiler industry is as bad as communism, he stated. This declaration brought strong reaction from Rep. Alford, who said that integration was part of this nation's free enterprise and that communism was an atheist concept with

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the land being owned by the state.

Mr. Casper, legal officer for NFO, wants government controls before integration and stated that the NFO had been in favor of the omnibus farm bill in its original draft.

Charles Rohde, hatcheryman, Aurora, Mo., testified that he was unalterably opposed to any and all controls. He agreed with other witnesses concerning the "cheap" credit situation. Mr. Rohde believes that this country was not built on controls but on free enterprise, with supply and demand the controlling factor. He stated that the bank owns controlling interest in his operation and that he may conceivably be forced out of the hatchery business. However, he believes his future should depend on his capabilities as a businessman and hatcheryman, and not on how much financial aid he gets from his fellow taxpayers through government subsidies.

DUST EXPLOSION

PERRYTON, TEXAS—An accumulation of dust was given as the cause of an explosion which wrecked a grain elevator in Perryton, Texas, and injured three persons. T. R. Shirley, manager of the Holland Grain Co., estimated the damage at more than $12,000, part of which was caused by fire.

Grain INSECTS Stopped the ECONOMICAL WAY!

"PERFECT PARTNERS!"

DOUGLAS TETRASPOT CONTROLS LOCAL INFESTATION — SPOT OR SURFACE

ASK your DOUGLAS Man how you can save money by using TETRASPOT to control spot and surface insect infestation. With TETRASPOT you don't pay good money to fumigate un-infested grain.

Douglas CHEMICAL COMPANY
620 East 16th Avenue, North Kansas City, Missouri

45 Years of Dependable Service

"Will you join me in a cup of tea?"
"Love to. You get in first."

◆ ◆ ◆

Mr. Kranz took one look at the household bills for the month, groaned audibly and reached for a headache powder. Mrs. Kranz regarded his antics with vast displeasure. "Let's have none of your small-time pantomime," she grumbled. "If you have something to say, shut up!"

◆ ◆ ◆

A man took his Great Dane to a vet. "Doctor," he said, "you've got to do something. My dog does nothing but chase sports cars."

"Well, that's only natural," replied the vet. "Most dogs chase cars."

"Yes," the man agreed. "But mine catches them and buries them in the back yard."

◆ ◆ ◆

A distinguished American author had no desire to become a citizen of the Soviet, but he did want the experience of living in Moscow for a spell. Somewhat to his surprise he wangled a visa for himself and family and set forth. At the border control, however, customs officials eyed his van-load of supplies with open suspicion, and after searching everything very carefully, made him remove the label from every box and can he was bringing with him.

That may explain a certain difficulty his Ukrainian cook experienced with the canned goods one evening during her first week on the job. Warned not to bother the master with questions, she figured things out for herself—and proudly served for dessert at dinner two cans of tennis balls, smothered in sour cream!

◆ ◆ ◆

Some people have read so much about the harmful effects of smoking that they have decided to give up reading.

◆ ◆ ◆

Mother: "When that naughty boy threw stones at you, why didn't you come and tell me, instead of throwing them back at him "

Jimmie: "What good would that do? You couldn't hit the broad side of a barn."

◆ ◆ ◆

The small touring company was doing "Ali Baba and the 40 Thieves." Unfortunately, the cast provided for only 5 thieves, so that when the gallant 40 marched into the robbers' cave, they had to double round the back of the stage and repeat the maneuver as many times as necessary.

One of the thieves had a limp and as he emerged a trifle winded from the wings for the 8th time, an encouraging voice from the gallery called out: "Stick to it, Hoppy. Last lap!"

◆ ◆ ◆

"What do you think of the latest news of the foreign situation, Senator?"

"Don't bother me; I gotta get on the radio and talk. In a crisis like this there is no time to think."

◆ ◆ ◆

The night watchman heard strange noises in one of the darkened front offices. Deciding to investigate, he approached the room and called, "Who's there? Come out with your hands raised so I can see who you is. If you don't I'll come in and see who you was."

Balanced HEALTH MANAGEMENT

brings out the best in today's poultry breeding and feeding . . .

Today's broilers, layers and turkeys have great bred-in capacity. And today's modern feeds provide high nutrition levels. These factors are very important . . . but they are not enough!

It takes a combination of breeding, feeding and health management for profitable production. If any of these steps are neglected—the others are handicapped.

For example, many broiler condemnations, turkey mortality or losses due to morbidity and laying flock depletion can be traced directly to improper health management.

We believe you and your customers can profit most by practicing Balanced Health Management. This means doing what is necessary to prevent disease. You can help them achieve this objective by including proper disease prevention and controls in your formulations.

Several Dr. Salsbury's Health Management products that contribute to profitable bird raising are discussed in the following pages.

Here's how Dr. Salsbury's proven Health Management Products can help your feeds perform better through improved flock health

BALANCED HEALTH MANAGEMENT brings out the

Growth Stimulation

3-NITRO®

Stimulates growth, improves feed efficiency

For 14 years, 3-Nitro has set a standard of performance in stimulating fast, efficient gains. Because of favorable grower experience, more than half the commercial broilers get 3-Nitro in their feed. Broilers gain faster, with better feed conversion. Laying flocks benefit, too. More hens live and lay.

Among swine, records indicate growing pigs average 16% heavier—*on 5% less feed*—with 3-Nitro in the ration . . . gives more uniform finish, with less disease problem.
These are benefits that help your feed perform even better.

best in today's poultry breeding and feeding

Coccidiosis Prevention

UNISTAT®

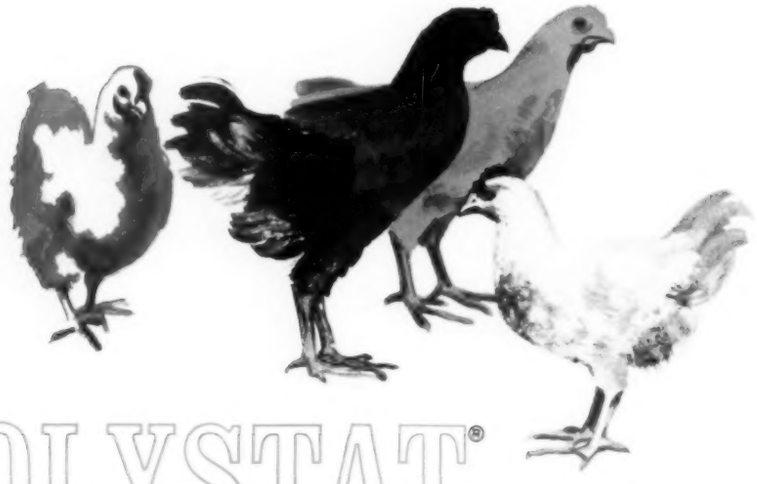
Stimulates growth, improves feed efficiency and prevents coccidiosis

Growth stimulation alone cannot prevent disease. Coccidiosis is a universal problem for your customers . . . mix Unistat in your feeds for chicks, pullets, and broilers. Unistat *prevents coccidiosis* under practical field conditions. Yet it allows immunity to develop in pullets . . . and it does even more. Birds given Unistat in their feed from the start show improved feed conversion, faster growth, better coloring. These extra benefits enable growers to put more pounds of the best broiler meat into the dressing plant—economically produced.

Encourage your customers to feed Unistat, the coccidiostat that also stimulates growth and improves feed efficiency. Unistat is a most important health management product for broilers and replacement birds.

BALANCED HEALTH MANAGEMENT brings out the

Coccidiosis and Worm Prevention



POLYSTAT®

for chickens and turkeys

. . . a coccidiostat that stimulates growth and feed efficiency, protects against large roundworms, tapeworms, turkey bluecomb and hexamitiasis

If you or your customers want a feed that protects growing chicks and turkeys against both worms and coccidiosis, in addition to stimulating fast, efficient gains, offer a growing mash formulated with Polystat. Polystat is a multi-purpose feed additive that provides more health management benefits than any other similar product. On Polystat, poults and broiler chicks start faster, stay ahead. They grow into sturdier, healthier birds, the kind that return highest profits because healthy birds get more good out of their feed.

best in today's poultry breeding and feeding

WORMAL is tops for tapes

Removes more species of tapeworms than any other wormer... also controls large roundworms and cecal worms

Wormal gives your feed a chance to do its best by removing nearly 100% of the major types of poultry worms. Only Wormal contains **dibutyltin dilaurate,** a drug that removes *3 times as many species of tapeworms as any other wormer.* Because worm-free birds are healthier, birds get more good out of their feed, feed efficiency goes up. This makes your feed look even better, just as it enables birds to grow or produce at their bred-in ability. So include Wormal in your worming mash formulations and help growers make more profit from their well-bred, well-fed birds.

STREPCILLIN F-25 *provides teamed antibiotics for better health and production*

Strepcillin F-25 gives your feeds added disease-fighting benefits—a product for times of stress! A product of antibiotics working together as a team, each supplementing the other. Can be mixed at different levels for proper health management in chickens, turkeys, swine.

BIOLOGICS... *to complete your health management program*

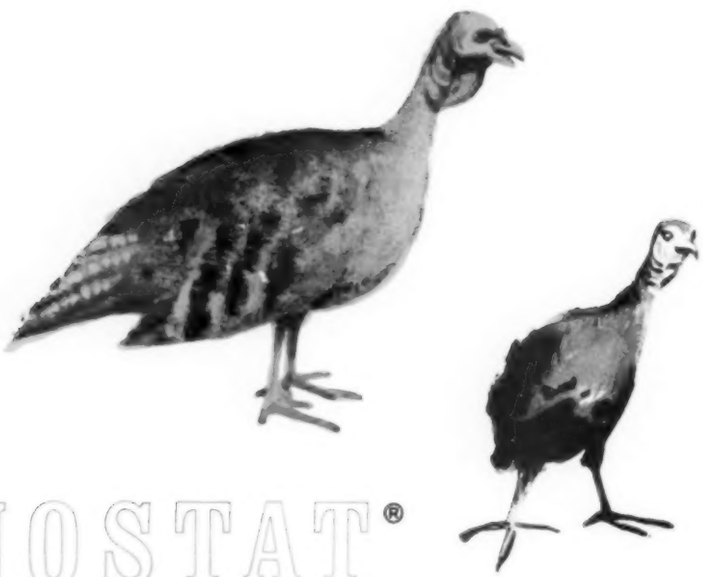
Dr. Salsbury's Laboratories pioneered in the development of low-cost, easy-to-use vaccines that take much of the disease risk out of poultry raising. These high quality vaccines have been used to protect billions of birds from the major virus diseases!

Recently, a new, instantly soluble vaccine was introduced—SoluVac. Already SoluVac has gained widespread popularity because of its superior efficacy.

Dr. Salsbury's Laboratories has developed complete vaccination programs that assure immunity by tailoring vaccine administration to individual flock needs. All this helps keep birds healthy. And healthy birds get more good out of their feed.

BALANCED HEALTH MANAGEMENT brings out the

Coccidiosis Prevention



TINOSTAT®

Protects turkeys against coccidiosis and hexamitiasis

More and more growers are starting poults on feed containing Dr. Salsbury's Tinostat. Tinostat contains 25% **dibutyltin dilaurate,** an exclusive Dr. Salsbury's compound. It *prevents mortality and loss of weight* because it has specific action against turkey coccidiosis and hexamitiasis. Tinostat is also economical to use, has no undesirable side effects, and is extremely palatable. With Tinostat in your starter rations, you are offering positive protection against two of the most troublesome turkey diseases—coccidiosis and hexamitiasis.

best in today's poultry breeding and feeding

Blackhead Prevention

HISTOSTAT®-50

Proven the best blackhead preventive

More and more turkeys are being grown and finished on feed containing Dr. Salsbury's Histostat-50. Histostat-50 consistently protects flocks against mortality and weight loss due to blackhead. It gives the type of disease prevention that assures strong, healthy birds—birds that get more good out of the feed because they're healthier.

For grower benefits that make new customers and keep the old, mix Dr. Salsbury's Histostat-50 in your turkey growing mash. It's the best blackhead preventive on the market today!

BACTERINS... *to complete your turkey health management program*

PASTEURELLA AVICIDA BACTERIN (emulsified)
For the prevention of fowl cholera

ERYSIPELAS BACTERIN
For erysipelas prevention

With these Dr. Salsbury's bacterins, healthy turkeys can be immunized against erysipelas and fowl cholera. Quality controlled to assure high level immunity in growing and breeding flocks. Economical to use—costs only pennies per bird treated.

BALANCED HEALTH MANAGEMENT brings out the best in today's poultry breeding and feeding

CALL A DR. SALSBURY'S HEALTH MANAGEMENT ADVISER

. . . Let him help you

There is a Dr. Salsbury's Health Management Adviser serving your area. Call on him . . . to help with any problems in Health Management. He welcomes the opportunity to serve you and your customers to get improved profit results.

Dr. Salsbury's Health Management Advisers can be helpful in many ways. They know the poultry and livestock business and the importance health plays in giving a profitable end result.

Your customers look to you for nutritional advice . . . and feed that gives better results.

Look to Dr. Salsbury's for proven Health Management Products to give you and your customers even greater benefits.

Phone or write today!

Dr. SALSBURY'S LABORATORIES
Charles City Iowa, U.S.A.

MORE THAN PRODUCTS—A SYMBOL OF SERVICE

Allied Mills Opens Specialty Feed Mill

CHICAGO—Opening of a new Wayne specialty feed plant in Peoria, Ill., has been announced by Allied Mills, Inc., Chicago.

Wayne Calfnip, the firm's milk replacer, and laboratory animal diets are being made in the plant, according to F. H. Blough, vice president in charge of manufacturing.

Mr. Blough states that this new plant is located on the same property as the large Wayne feed plant at Peoria, but is completely separated and isolated from other operations in order to provide desired advantages in the manufacturing of specialty feeds.

The building is 200 ft. long and 70 ft. wide, constructed of steel and concrete block, with laboratory animal diet production facilities completely separated from other operations, he said. Ten 28-ton tanks for bulk storage are charged with an air system and are set up and designed in such a manner that all incoming raw materials can be tested for estrogenic activity prior to use. The tanks can be completely emptied without any contaminated or rejected material getting inside the plant proper.

"In the milk replacer operation, there is storage space for a million pounds of bagged raw materials. Premixers, batch mixers and a new gas-fired drier and cooler to control moisture and a complete dust-control system give flexibility and efficiency of operation to this plant," the vice president said. "Both truck and rail unloading and loading facilities make fast service available. Both milk replacer and laboratory animal diet manufacturing operations are fully automatic."

Morris T. Gilmore is Peoria plant manager, and O. B. Popp is assistant plant manager in charge of specialty feed production.

Allied Mills' Peoria plant, including specialty feed plant in foreground

Broiler Plan Described As 'Strictly Political'

GEORGETOWN, MD.—"It is strictly a political deal," is the way Wilbur (Webb) Cassell, past president of the Delmarva Poultry Industry, Inc., described the Atlanta, Ga., movement to get a broiler marketing order. He was a speaker at the regional poultry meeting here.

He said, "I would like to leave this thought with you. I don't see how, according to the people at the (Atlanta) meeting, there will be anything 100% agreeable.

"All the time they were talking about cutting back, they were talking about building more houses for efficiency."

Delmarva was represented in Atlanta by Mr. Cassell for Maryland, and Ed Covell, J. McKenny Willis & Son, Inc., Easton, voted for Delaware. The meeting was called to discuss marketing order legislation for poultry. Some 100 broiler producers, hatcherymen, processors, feed dealers and allied industry leaders were there. States represented were: Georgia, Florida, Alabama, Mississippi, Tennessee, North Carolina, South Carolina, Maryland, Virginia, Texas, Delaware, and Arkansas.

Mr. Cassell described the meeting as being one of a lot of "smooth" talking to convince others that a marketing order is the only solution. Only Georgia and Virginia were for the controls in the broiler industry.

Political Interests

Judging from the information picked up during informal conversations, Mr. Cassell said it appears that those taking leadership are not necessarily involved directly in the broiler business. In some cases, they are seeking to gain in their political standing. Some were self-appointed to represent their states and did not represent the thinking of the broilermen back home.

He warned those attending the regional meeting that if broilermen got a marketing order, every step will be guided by the U.S. Department of Agriculture.

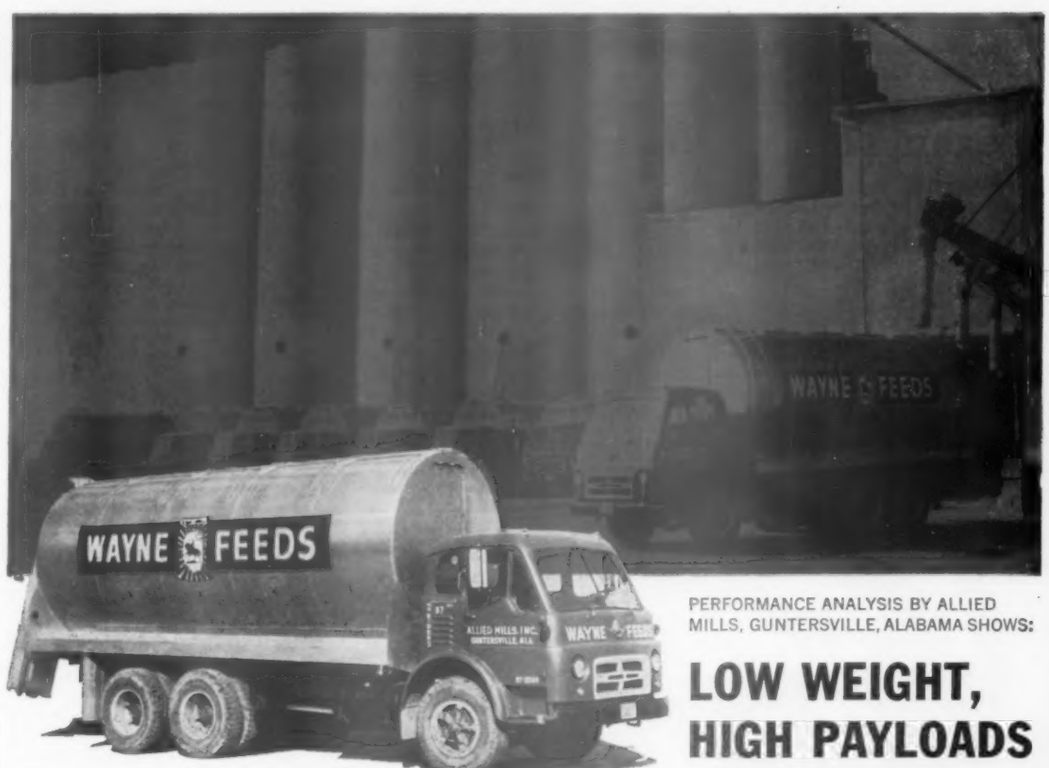
"It will not be something that we have of our own," he said.

After a morning session in Atlanta, the momentum seemed to die. It was revived by the leaders calling for a committee representing each state to study the proposed marketing order. Mr. Cassell said he and Mr. Covell stayed as late as they possibly could that afternoon and still catch their plane.

Prior to Mr. Cassell and Mr. Covell leaving the session, the committee was still working on the first paragraph. The problem was, who is going to do the voting? Is it going to be the man with broilers, or is it going to be the feed contractor?

LA BUDDE
MILWAUKEE, WIS.

MALT SPROUTS
BREWERS GRAINS
DISTILLERS GRAINS
BEET PULP
AND 44 OTHER FEEDS



"FMC bulk transport units help reduce our costs, because they transport top payloads and give efficient, dependable service," says Mr. Ed Buchanan, Manager, Allied Mills, Guntersville, Ala.

"We bought the largest truck body FMC has available—20 feet long—and on each trip we can haul at least 15 tons of bulk and some bagged feed," Mr. Buchanan continues. "And based on others' experience, we expect at least 8 to 10 years of life from our FMC units."

Mr. Buchanan is one more FMC user who takes these exclusive FMC benefits for granted: High payloads, low weight * Long equipment life * Fast unloading * Trouble-free, all-mechanical operation * Minimum maintenance costs * Least pellet fines.

Join the rapidly growing group of informed feed men who have learned from experience that:

FMC BULK SYSTEMS COST LESS—BECAUSE THEY DO MORE, LAST LONGER!

PERFORMANCE ANALYSIS BY ALLIED MILLS, GUNTERSVILLE, ALABAMA SHOWS:

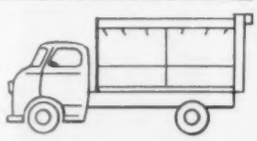
LOW WEIGHT, HIGH PAYLOADS OF FMC BULK UNITS PAY OFF!

Long capital life, fast unload speed, and all-around mechanical dependability also influential in Guntersville's purchase of eight FMC Bulk Units

LOCAL DELIVERY NOW POSSIBLE TO ALL POINTS

Now you can take "freight allowed" delivery of your FMC Bulk Units from any point in the U.S. Some of our service and mounting facilities are located at Jackson, Mississippi; Albertville, Alabama; Charlotte, North Carolina; Ft. Wayne, Indiana; Buffalo, New York; Denver, Colorado, etc.

Watch for announcement of additional service points now being established.



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BULK TRANSPORT SYSTEMS

PACKING EQUIPMENT DIVISION
OF FMC CORPORATION
Riverside, California

Overseas Sales: FMC International, P. O. Box 1178, San Jose, Calif., U. S. A.

FMC CORPORATION
Bulk Transport Systems · Riverside, California

NAME
COMPANY
ADDRESS
CITY STATE

VERMONT CONVENTION—Officers and directors of the Vermont Feed Dealers & Manufacturers Assn. for 1962 are pictured in the first photo. Second picture shows program speakers at the group's convention in Burlington, Vt.

Seated left to right in the first photo are: A. W. Barrows, Brandon, Vt.; A. S. McKillop, St. Albans, Vt.; Goodwin Crosby, Danby, Vt.; H. G. Savage, Bennington, Vt. (president, 1961); D. C. Henderson, secretary-treasurer, Burlington; Raymond Smith, president, Montpelier, Vt.; and Ray Durfee, Bethel, Vt. Standing, left to right, are: Chas. Landry, vice president, Brattleboro, Vt.; Raymond Bumps, Middlebury, Vt.; A. M. Smith, ex-officio, Burlington; Richard Ide, St. Johnsbury, Vt.; and A. S. Morrill, Burlington.

In the second photo, Vermont convention speakers from left to right are: R. P. Davison, director, University of Vermont, Burlington; Rodney Martin, agricultural engineer, H. P. Hood Co., Boston; Dr. W. Lyle Fitzgerald, manager, economics research, Quaker Oats Co., Chicago; H. G. Savage, president (1961), Vermont Feed Dealers & Manufacturers Assn., Bennington; Dr. B. R. Poulton, head, department of animal science, University of Maine, Orono; and Raymond Smith, president, Vermont Feed Dealers & Manufacturers Assn., Montpelier.

Texan Tells of Visit by FDA Inspectors

FT. WORTH—Texas feed men have been assured by one of their fellow feed men who has been visited by the Food and Drug Administration inspectors that such a visit is nothing to fear.

Harry Dobbyn, Power Feed Mills, Abilene, Texas, in a report "We Have Been Inspected by Food and Drug Administration," says that the inspection of the mill was by fair and competent people and was conducted with courtesy and understanding.

Mr. Dobbyn's account of the visit of the inspectors, as distributed to Texas feed men by the Texas Grain & Feed Assn., follows:

"In telling you of our experience with the FDA and the complete investigation of our feed mill, we are doing so with one express purpose in mind. Those of you who have not been visited, and are wondering what to do about it, may get some ideas from our experience that will help you to conform to FDA's wishes. First, let us say that the men who visited us were extremely courteous and helpful and were very appreciative of the help that we tried to give them. They are doing their job and they can be of considerable help to all of us. We feel that they have helped us. The following is their method of procedure at our plant:

"(1) One representative of the department visited us first. He opened his book to a long list of names of certain additives, medicaments, etc., to see if we were using any of them in our feeds. Certain ones that were used by themselves were not critical but were on the critical list when used in conjunction with others. About these feeds that included any of these items, we gave him complete formulas, including the breakdown of premixes purchased, inplant premixes, in fact, a list of every ingredient that went into these feeds.

"He spent three days in the plant, following down all of these items in these certain feeds. We gave him other formulas which he studied at length to be sure they did not include any of the items he was looking for. He checked our plant for the method in which we handled any residue from mixing, checked our dust collector system, checked to be sure our batch mixers were grounded, etc. They are trying to make sure that these critical items are thoroughly controlled, and that they don't find their way, even in very small quantities, into feeds they don't belong in.

"Some of the things we have done over the past two years, and which we believe were very helpful to us, are as follows:

Procedures

"(a) All of our critical items are kept in a separate storeroom under lock and key. The only two men having a key are the head man at the mixer and the plant manager. A perpetual inventory is kept on each of these items. At 4:30 p.m. each day the mixer head man brings in all of the batch cards covering feeds that have been made that day, and the items that should have gone into these feeds, as shown on the batch cards, are listed in this perpetual inventory. The man then takes the balance totals to the locked storeroom and weighs all of those items that have been used that day to be sure they check out to the fraction of a pound. If there are discrepancies, they are caught before the feed that was made that day leaves the plant.

"(b) Instructions covering certain operations are posted in the mill. In brief, these instructions cover the 'cleanout' of our batch mixers and conveyors, elevators, etc., following certain mixes. This cleanout is not necessary if we are making several types of feed, one after another, where the ingredients are fairly close to the same. When we make a critical feed, the instructions are to run about 200 lb. of ground milo through the system, pack it off in sacks, and then tag it with the type of feed that was just made. When we are on that type of feed again, this ground milo is put into this feed, cutting the bulk milo that goes into the mix proportionately.

"(c) Several of our batch cards have large red letters (stamped) on them, saying 'clean out after mixing,' or 'be sure you clean out before mixing.'

"(d) The dust that accumulates in the plant is taken to the dump ground. This might be considered a wastage, and surely there is some product that it can be used for. However, we prefer not to take that chance in our program, so don't use it.

"When this man was through he told us that, strange as it may seem, he had no suggestions to offer at the time, but would report back to his office on his findings. He was merely the initial contact.

"(2) About three weeks later we were visited by two men who came into the plant in their white coveralls. They were interested in only one thing—those feeds that had critical items in them.

"They took these formulas and went through the plant with a fine toothed comb, checking every ingredient of any kind. They did not take any labels from the sacks, but took pictures of every sack, its labels, etc., even down to taking a picture of a sack of salt. They also took samples from each of these bags, so they had samples and label pictures of every item going into the feeds, regardless of how small the quantity. They also took samples of the critical feeds that had been mixed and were on our warehouse floor. No feeds were checked that were not on the critical list.

"They also spent several hours in the plant checking batch mixers; getting information as to types of equipment, model numbers, etc.; watching the plant operation, and getting a first hand knowledge for their complete reports.

"We have not heard from them since. When we do, the report may be good or bad, but whatever corrections they recommend, we will try to work with them. This, of course, is necessary, but we will do it willingly because we believe they will help us to do a better job."

For Profit, Service, Quality

3 Reasons Why You Should Use CK Econolass In Your Feed

1. CK Econolass is a consistently top-quality product—every bag, all year 'round. (85% feeding cane molasses equivalent—dehydrated on soybean mill feed.)

2. With CK, you get the LOWEST possible price and FASTEST possible service. CK uses no gimmicks or premiums to buy business (You know who really pays for that).

3. Econolass is a good product which adds palatability to your feeds. It mixes easily, stores well and is convenient to handle in 50 lb. moisture-resistant bags.

CK IS OK — ORDER TODAY
(Distributor inquiries invited)

CK PROCESSING COMPANY
Muscatine, Iowa

Named Top Salesman

ST. JOSEPH, MO.—Don Peterson of St. Joseph was named outstanding district representative at the annual sales conference of The Quaker Oats Co.'s Midwest feed division at St. Joseph.

The award was presented by Ray Ammon, division sales manager. The division territory covers seven states.

Convention Calendar

CALENDAR FOR 1961-62

OCTOBER

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New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

1962

Jan. 23-27—New Jersey Farmers Week and Farm Show (Jan. 23-25); Trenton Armory; sec., Phillip Alampi, New Jersey Department of Agriculture, Trenton 25.

Jan. 30-31—Illinois Agricultural Industries Forum; University of Illinois, Urbana, Ill.

Feb. 2-3—Minnesota Turkey Growers Assn.; Leamington Hotel, Minneapolis; sec., Roy C. Munson, 2200 University Ave., St. Paul 14, Minn.

Feb. 18-20 — Ohio Grain & Feed Dealers Assn.; Commodore Perry Hotel, Toledo; sec., George G. Greenleaf, P.O. Box 151, Worthington.

March 4-6—Nebraska Grain & Feed Dealers Assn.; The Cornhusker Hotel, Lincoln; sec., Howard W. Elm, Terminal Bldg., Lincoln 8, Neb.

March 13—Illinois Swine Growers Day; Univerity of Illinois, Urbana, Ill.

Oct. 15-17—Kentucky Poultry Federation and Kentucky Poultry Improvement Assn.; Kenlake Hotel, Hardin, Ky.; field mgr., Kentucky Poultry Improvement Assn., John W. Tuttle, 730 Rose St., Lexington, Ky.

Oct. 15-20—School of Executive Development in Business Management, Unit III; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 Ponce de Leon Ave., Decatur, Ga.

Oct. 16-17 — California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; co-sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; sec., California Hay, Grain & Feed Dealers Assn., Leo L. Johnson, Blue Anchor Bldg., 1400 10th St., Sacramento, Cal.

Oct. 18—Feed Industry Public Relations Conference; Water Tower Inn, Chicago; sponsored by American Feed Manufacturers Assn.; R. L. Kathe, AFMA, 53 W. Jackson Blvd., Chicago 4, Ill.

Oct. 18-19—National Broiler Council; King Edward Hotel, Jackson, Miss.; exec. v.p., Frank Frazier, Byrd Building, Richmond 26, Va.

Oct. 23-25 — Centennial Nutrition Conference; Hotel Muehlebach, Kansas City 5, Mo.; sponsored by Midwest Feed Manufacturers Assn. and Land-Grant Colleges in Midwest's area; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Oct. 24-25—Virginia State Poultry

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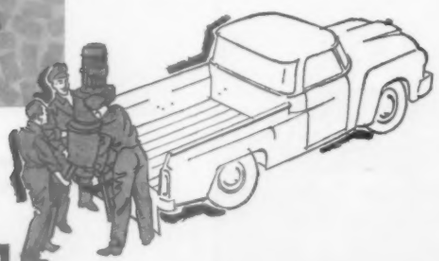

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Federation; Hotel John Marshall, Richmond, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19.

Oct. 24-25—Indiana State Poultry Assn.; Hotel Severin, Indianapolis; sec., Robert L. Hogue, Poultry Science Bldg., Purdue University, Lafayette.

Oct. 26-28—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone, Head, Feed and Fertilizer Control Dept., University of Kentucky, Lexington.

Nov. 1—Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Dr. Philip Derse, Wisconsin Alumni Research Foundation, 506 Walnut St., Madison 5, Wis.

Nov. 1-2—Kansas Poultry Assn.; Broadview Hotel, Wichita; sec., Harry J. Reed, Box 663, Manhattan.

Nov. 1-3—Cornell Nutrition Conference; Statler Hilton Hotel, Buffalo, N.Y.; chm., Prof. Douglas E. Hogue, Animal Husbandry Dept., Wing Hall, Cornell University, Ithaca, N.Y.

Nov. 5-8—National Renderers Assn., Inc.; Waldorf-Astoria Hotel, New York, N.Y.; asst. sec., Rose Alpert, 30 North La Salle St., Chicago 2, Ill.

Nov. 6-7—Egg Industry Conference; North Carolina State College, Raleigh; Motte V. Griffith, Jr., College Extension Division, Box 5125, Raleigh.

Nov. 7-8—Nebraska Poultry Improvement Assn.; National Guard Armory, 176 No. 10th St., Lincoln; sec., Doyle H. Free, Poultry Husbandry Bldg., University of Nebraska, Lincoln.

Nov. 8-9—Illinois Feed Assn.-Illinois Poultry & Hatchery Federation joint convention; Springfield Armory, Springfield; sec., I.F.A. Dean M. Clark, 141 W. Jackson Blvd., Chicago 4; sec., I.P.H.F., Aubrey Harless, Shelbyville, Ill.

Nov. 9-10—National Swine Industry Conference; Statler-Hilton Hotel, St. Louis, Mo.; chm., Keith Myers, Grundy Center, Iowa.

Nov. 13-14—Washington Animal Industry Conference; Skagit Valley College, Mount Vernon, Wash.; John G. Wilson, mgr., Washington State Feed Assn., Inc., 814 Second Ave. Bldg., Seattle 4.

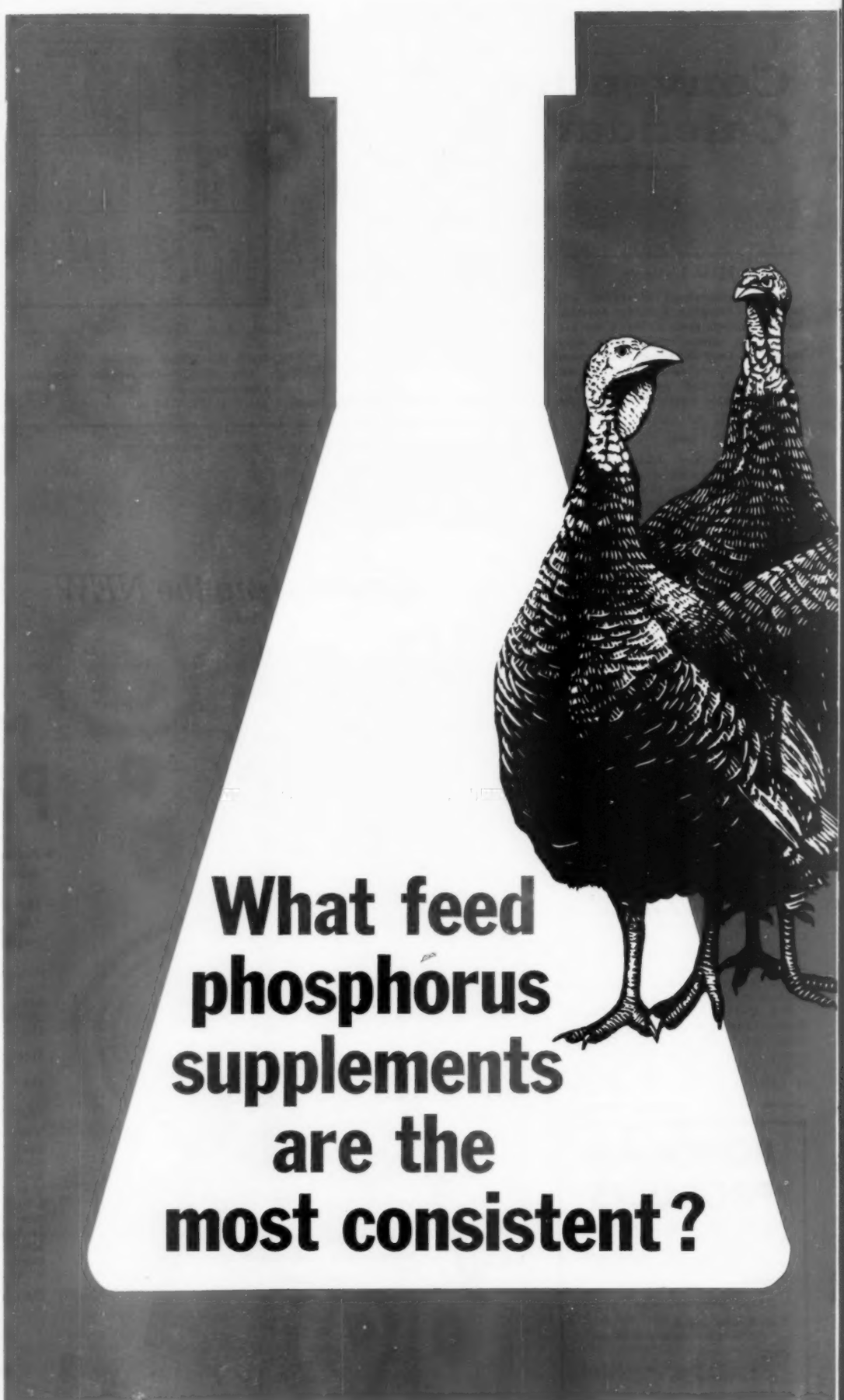
Nov. 16-19—Florida Nutrition Conference; Grand Bahama Hotel, West End, Grand Bahama Island; chm., Dr. J. P. Feaster, Animal Husbandry and Nutrition Dept., University of Florida, Gainesville.

Nov. 17—Nebraska Feed and Nutrition Conference; University of Nebraska, Lincoln; Dr. P. L. Kelly, chm., Dairy Husbandry Dept.

Nov. 17-18—Tennessee Feed Manufacturers Assn.; Chisca Downtown Motel, Memphis, Tenn.; sec., C. H. Warfield, 200 American Trust Bldg., Nashville, Tenn.

Nov. 19-21—Western Grain & Feed Assn. of Iowa; Fort Des Moines Hotel, Des Moines, Iowa; sec., Bob Skinner, 401 Shops Bldg., Des Moines 9.

Nov. 30-Dec. 1—Dealers Nutrition Conference; University of Nebraska,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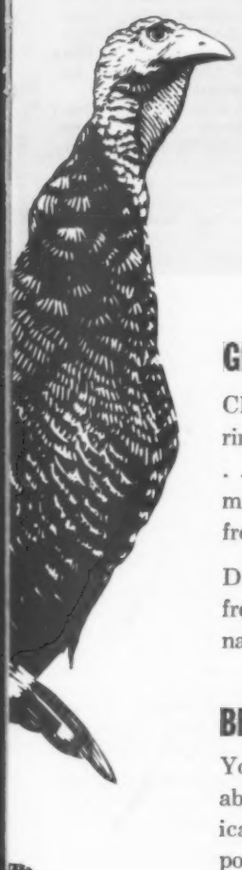

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	Phosphorus	Calcium	Fluorine
CDP	18.0% min.	31.1% min. 34.0% max.	0.18% max.
	Screen analysis: All through 14 mesh; 80% on 200 mesh, plus or minus 5%.		
DIKAL	18.5% min.	20.0% min. 23.0% max.	0.12% max.
	Screen analysis: All through 20 mesh; 80% to 90% on 200 mesh.		

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COMPANY, INC. HOME OFFICE: NORFOLK, VA.

Lincoln; Dr. P. L. Kelly, chm., Dairy Husbandry Dept.

Dec. 5-6 — North Dakota Turkey Convention; Civic Center Auditorium, Fargo; sec., North Dakota Turkey Federation, Irving J. Mork, Box 2408, State University Station, Fargo.

Dec. 6-7 — Missouri Poultry and American Poultry & Hatchery Federation Midwest Quickie Convention; Hotel Continental, Kansas City, Mo.; sec., Missouri Poultry Improvement Assn., E. M. Funk, Box 568, Columbia, Mo.

Dec. 7-8—Michigan Feed & Grain Dealers Assn.; Pantlind Hotel, Grand Rapids, Mich.; sec., Nevels Pearson, Box 472, East Lansing.

Dec. 7-8 — North Carolina Animal Nutrition Conference; North Carolina State College, Raleigh; chm., Dr. G. H. Wise, Animal Nutrition Section, Animal Industry Dept.

Dec. 13—American Society of Agricultural Engineers; Palmer House, Chicago; grain storage and feed processing session, cooperative program sponsored by ASAE and Grain Processing Machinery Manufacturers Assn.; sec., GPMMA, John Wessman, 400 W. Dartmouth Rd., Kansas City 13, Mo.

1962

Jan. 8-9 — Kansas Formula Feed Conference; Kansas State University, Manhattan; chm., Prof. T. B. Avery, Poultry Science Dept., West Waters Hall.

Jan. 9-11—National Turkey Federation; Memorial Auditorium, Dallas, Texas; co-headquarters hotels, Baker and Adolphus; sec., M. C. Small, Box 69, Mount Morris, Ill.

Jan. 21-23—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4.

Jan. 21-24—Farmers Grain Dealers Association of North Dakota; Civic Memorial Auditorium, Fargo; sec., Lloyd C. Hanson, 513 Black Bldg., Fargo.

Jan. 28-30—Midwest Feed Manufacturers Assn.; Shamrock-Hilton Hotel, Houston, Texas; exec. vice pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City, Mo.

Jan. 29-31 — Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

1962

Jan. 31-Feb. 1 — Illinois Nutrition Conference; University of Illinois, Urbana; chm., Dr. Carl L. Davis, Dairy Science Dept.

Jan. 31-Feb. 1 — New Hampshire Poultry Health Conference; University of New Hampshire, Durham; Richard Warren, Poultry Science Dept.

Feb. 1—Missouri Turkey Day; University of Missouri, Columbia; sec., Missouri Poultry Improvement Assn.,

IT TAKES THE WORLD'S FASTEST GROWING BIRD *TO BEAT BREAK-EVEN BROILER PRICES!*

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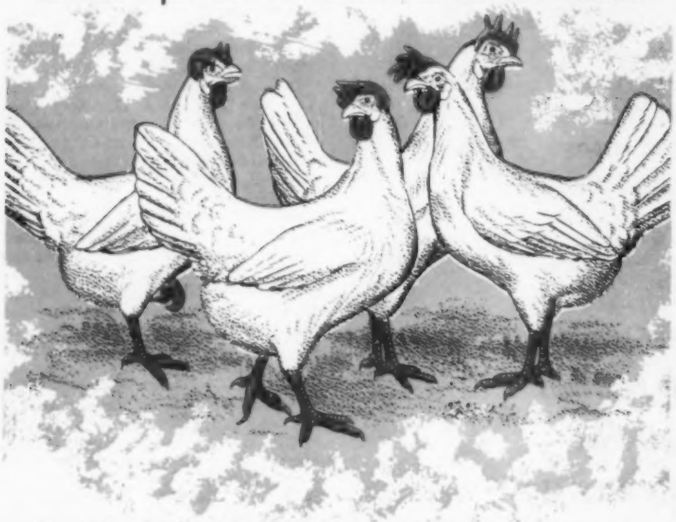

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E. M. Funk, Box 568, Columbia.

Feb. 1-2—Oregon Animal Industry Conference; Oregon State University, Corvallis, Ore.; co-sponsored by the Oregon Feed & Seed Dealers Assn. and Oregon State University; chm., Bill Eggimann, Dairy Cooperative Assn., 2613 S.E. 8th Ave., Portland.

Feb. 4-6—Wyoming Grain, Feed & Seed Dealers Assn.; Townsend Hotel, Casper, Wyo.; sec., Everett L. Berry, Box 118, Sheridan, Wyo.

Feb. 5-7—Association of Southern Agricultural Workers; Jacksonville, Fla.

Feb. 7-9 — American Dehydrators Assn.; Stardust Hotel, Las Vegas, Nev.; Joseph Chrisman, 430 Board of Trade Bldg., Kansas City 5, Mo.

Feb. 9-11 — Poultry Fact Finding Conference; sponsored by Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 67 E. Madison, Chicago 2, Ill.

Feb. 12-13 — Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry and Range Management Dept.

Feb. 14-15—Pacific Northwest Feed Mill Production School; Benjamin Franklin Hotel, Seattle; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 15-16 — Utah Feed Manufacturers & Dealers Assn. Annual Nutrition Conference and Meeting; The Newhouse Hotel, Salt Lake City; sec., Dr. Lawrence Morris, Brigham Young University, Provo.

Feb. 16 — Washington State Feed Assn. annual convention; Benjamin Franklin Hotel, Seattle; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 20-21 — Virginia State Feed Convention and Nutrition Conference; Hotel Roanoke, Roanoke, Va.; sec., Virginia State Feed Assn., J. Paul Williams, 615 E. Franklin St., Richmond 19, or Prof. Paul M. Reaves, Dairy Science Dept., Virginia Polytechnic Institute, Blacksburg.

Feb. 26-March 1 — Colorado Livestock Days; Colorado State University, Fort Collins; chm., Dr. C. D. Story, head, Animal Science Dept.

March 2-3—Oklahoma Feed Industry Conference and Work Shop; Oklahoma State University, Stillwater; Dr. Rollin H. Thayer, chm., Poultry Science Dept.

March 8-9 — Maryland Nutrition Conference; Shoreham Hotel, Washington, D.C.; chm., Dr. R. D. Creek, Poultry Dept., University of Maryland, College Park.

March 15-16—Oregon Feed & Seed Dealers Assn.; Sheraton Hotel, Portland; sec., Russ Hays, Lewis Bldg., Portland 4.

March 15-17 — Pacific Dairy and Poultry Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Lloyd J. Powers, 1304 E. 7th St., Los Angeles 21.

March 19-21—Poultry and Egg National Board; Palmer House, Chicago, Ill.; mgr., Lloyd H. Geil, 8 S. Michigan Ave., Chicago 3.

March 21-23—Grain & Feed Dealers National Assn.; Denver-Hilton Hotel, Denver, Colo.; Secretaries Circle meetings March 19-20; sec., Herbert L. Sharp, 401 Folger Bldg., 725 15th St. N.W., Washington, D.C.

March 25-30 — Grain Elevator & Processing Superintendents; Town House Motel, Omaha, Neb.; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

March 28—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati, Ohio; Dr. Lawrence E. Carpenter, Executive Director, Distillers Feed Research Council, 1232 Enquirer Bldg., Cincinnati 2.

March 28—Commercial Egg Clinic; Texas A&M College, College Station; B. C. Wormeli, Extension Poultry Husbandman.

April 9-10 — National Institute of Animal Agriculture; Purdue University, Lafayette, Ind.; sec., Karl D. Butler, P.O. Box 521, First National Bank Bldg., Ithaca, N.Y.

April 10-12—Animal Health Institute; Statler-Hilton Hotel, Washington, D.C.; sec., D. L. Bruner, 512 Shops Bldg., Des Moines 9, Iowa.

April 13 — Illinois Cattle Feeders Day; University of Illinois, Urbana.

April 18—Nebraska Feeders Day; University of Nebraska, Lincoln; chm., Dr. Robert M. Koch, Animal Husbandry Dept.

April 26-28 — Texas Grain & Feed Assn.; Hotel Texas, Ft. Worth; sec., R. B. Bowden, 504 Ft. Worth Club Bldg., Ft. Worth 2.

April 26-28—California Hay, Grain & Feed Dealers Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Leo L. Johnson, 1400 10th St., Sacramento 14, Cal.

April 26-28—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

April 27 — Indiana Cattle Feeders Day; Purdue University, Lafayette; chm., Dr. W. M. Beeson, Animal Science Dept.

May 4-5 — Illinois Grain Dealers Assn.; St. Nicholas Hotel, Springfield, Ill.; exec. sec., Donald E. Palmer, 910 Lehmann Bldg., Peoria, Ill.

May 10-11 — Alabama Poultry Industry Assn. Convention and Poultry Jubilee; Dinkler-Tutwiler Hotel, Birmingham, Ala.; sec., W. L. Walsh, Box 567, Montgomery.

May 10-12—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 54.

May 27-28—Missouri Grain & Feed Assn.; Hotel Governor, Jefferson City, Mo.; sec., D. A. Meinershagen, Higginsville, Mo.

June 28-30—Canadian Feed Manufacturers National Assn.; Sheraton Brock Hotel, Niagara Falls, Ontario, Canada; sec., Ontario Division, H. J. Willcock, 356 Eastern Ave., Toronto 8, Ontario.

July 17-19—American Poultry Congress & Exposition; St. Louis, Mo.; sec., American Poultry & Hatchery Federation, Don M. Turnbull, 521 E. 63rd St., Kansas City 10, Mo.

Aug. 13-18 — 12th World's Poultry Congress; Show Grounds of the New South Wales Royal Agricultural Socity, Sydney, Australia; Dr. Cliff D. Carpenter, chairman, U.S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Cal.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.

Aug. 24—Purdue Swine Day; Purdue University, Lafayette, Ind.; chm., R. A. Pickett, Animal Science Dept.

1963

March 24-29 — Grain Elevator & Processing Superintendents; Commodore Perry Hotel, Toledo, Ohio; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

FEED DOESN'T BRIDGE

in the NEW Chore•Boy Bulk Feed Bin!

Bridging—a serious trouble with many bulk feed bins—is a thing of the past. Chore•Boy's **exclusive** steel-mesh belt delivery keeps feed moving steadily through the entire area of the bottom hopper opening . . . feed at sides of bin keeps moving down, eliminates places for bridges to form. Developed for use with world-famous Chore•Boy Herringbone milking-Feeding-Handling System, this new bulk feed bin and its revolutionary **flexible auger** has been proven in all kinds of farm operations all over North America . . . in poultry, hog and other feeding systems. IN ADDITION to the Bulk Feed Bin, Chore•Boy provides a complete line of feed system components. Write for **free** Feed Systems brochure.

EXCLUSIVE! Flexible Auger goes around corners!

One source of power carries feed anywhere . . . up, down, around the corner! Chore•Boy Flexible Auger requires no extra power, no right-angle transfer equipment. Outside, Flexible Auger carries feed from bulk bin to barn. Inside, this revolutionary unit may be installed to carry feed to mangers, feed troughs, etc. Tested in use in many different applications, Chore•Boy Flexible Auger is simple, economical, **reliable,** requires very little power to operate.

BE SURE to get all the facts on Chore•Boy's new Bulk Feed Bin and Flexible Auger, along with Feed Systems Components . . . help build your profits!

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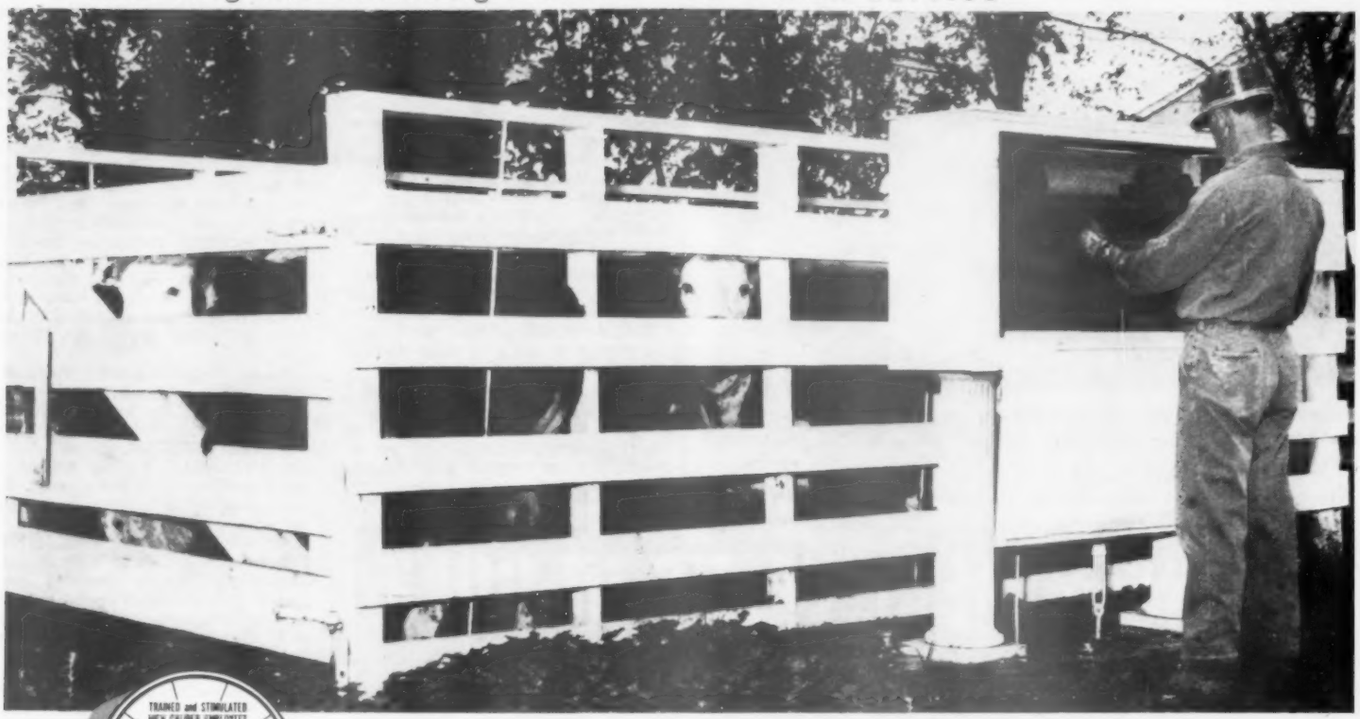


Folks on the feedlot tour conducted by "Sales Partner" Ryan and his southern Minnesota Purina Dealers saw accurate figures to prove results on the Raymond Hanson Farm. Cattle were weighed regularly . . . records carefully kept.

THE PURINA "ARCHWAY" PROGRAM

Feedlot tours show farmers practical roads to profits

Purina Dealers and their "sales partners," the Purina Salesmen, know from experience that the exchange of knowledge among neighbors is a valuable service to farm folks. To speed this flow of information, feedlot tours are organized by "sales partners" in cooperation with Dealers in their districts.

In visiting the feedlots of their neighbors, farm folks see various methods of feeding and management. They see different breeds and varying quality of stock . . . all being fed successfully. They usually find new ways to make their own operations more efficient.

This exchange of ideas is appreciated by farmers and their appreciation is reflected in tonnage figures at the stores with the Checkerboard signs.

WHY THE PURINA FRANCHISE IS THE MOST SOUGHT RURAL RETAIL OPPORTUNITY

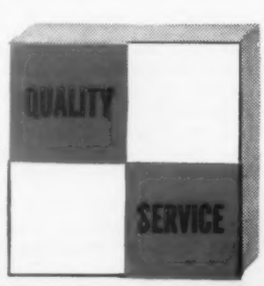
1. Dealers who follow the Purina Archway Program realize worthwhile profits on their investments.
2. Purina offers a well-rounded money-management program for Dealers.
3. The Checkerboard is rural America's best-known trademark.
4. There's a Purina Chow especially adapted to every livestock and poultry production situation.
5. Purina offers complete programs of breeding, management, sanitation and feeding.
6. Dealers are backed by one of the world's outstanding commercial research facilities.
7. Purina provides a complete line of research-proved sanitation products.
8. A coast-to-coast network of mills serves Purina Dealers.
9. The Purina Salesman and the Dealer have a "Sales Partnership" relationship.
10. The Ralston Purina Company is the world's largest feed manufacturer.

There are progressive, independent Purina Dealers covering most areas. If you are in one of the few remaining markets where the Purina Franchise is available . . . and if you are interested in an outstanding investment opportunity, write: RALSTON PURINA COMPANY, Department F-101, St. Louis 2, Missouri.

FRANK W. RYAN, "sales partner" of several Purina Dealers in southern Minnesota, helps farm folks and his Dealers by organizing tours of feedlots.

A typical tour in his district was conducted with the cooperation of 10 Dealers in three counties.

The five feedlots visited displayed a variety of cattle and methods, all of which showed figures to prove their profitability.



PURINA . . . YOUR "PARTNER" IN SERVING ANIMAL AGRICULTURE

LINSEED PLANT—This is an aerial view of the Minnesota Linseed Oil Co. plant bought by Farmers Union Grain Terminal Assn., St. Paul. (Feedstuffs, Sept. 30.)

Testify That Broiler Crisis Caused by "Cash" Operators

CENTER, TEXAS — Witnesses at the second day of a court of inquiry here, called by Will Wilson, attorney general, testified that the low prices for broiler chickens are largely due to overproduction by a flood of money from operators working on a cash rather than accrual basis.

The continuing increasing of production with this money, especially in Arkansas, Mississippi and Alabama, threatens to bust the broiler business wide open by next August, one witness testified.

James Goodard of Longview said there are enough breeder hens slated to produce broiler hatching eggs to cause a complete collapse of the industry. "I don't expect it to happen, though because I don't think there is enough money available to overexpand the industry to cause a collapse," he said.

Mr. Wilson said a detailed report will be made of the hearings held at Gonzales and Center, and he will make it public. "Testimony here indicates there may have been some actions going on in the past that, if continued, might constitute violations of state anti-trust laws, but I suspect those actions will cease" and "testimony also indicates there needs to be more accurate chicken replacement information, both on breeder hens and broiler chicks so that the industry can better adjust its business to more nearly match supply with demand at a fair price," Mr. Wilson said.

He stated that his office would file reports with congressional committees, especially the internal revenue committees, to give them information about suspected abuses of the tax laws written for the benefit of small farmers and being used by large, commercial poultry production concerns.

An accountant who deals largely with poultry accounts, William McGaughey of Jasper, testified that there are some poultry operators with as many as a million or more broilers on feed who keep their books on the cash basis and are able to defer income tax since they do not have to inventory their assets at the end of a tax year.

Gene Garrison, assistant manager of the Ralston Purina Checkerboard store, a company-owned store at Center, testified that three or four years ago Purina sold feed for about 25% of the 7 million broilers in Shelby County.

"Our business went down to practically nothing and we came back with the company store to get some of that business back. We have a $60,000 bulk station here and a big feed plant at Shreveport, La., so our investment is big," he said.

"We lost the business when our dealers quit or went into business for themselves, making feed from the ground up and feeding it to broilers."

Question Report Accuracy

Roy Herider of Center, a hatchery owner who has broiler growers under contract with 600,000 capacity, testified that he strongly questions accuracy of U.S. Department of Agriculture breeder and broiler chick replacement reports. He proposed that maybe an answer would be for county agents to have the authority to go into hatcheries and make accurate count of eggs being hatched.

Harold McDonald of Center said he believes the placement reports to be inaccurate, "but they are the best we have to go on." Mr. McDonald also blamed abuses of tax laws as a contributing factor in the broiler business and said he thinks broiler producers ought to be classed as industrial rather than a farming business.

Mr. Goodard said an industry type control program "with teeth in it" to control number of breeder hens would work to curb overproduction of broilers.

New Poultry Group

TUPELO, MISS.—A new organization, the Northeast Mississippi Independent Poultry Producers Assn., to represent a segment of the poultry industry in this area, was formed recently during a meeting of producers in Tupelo.

C. W. Smith of Corinth was elected as its first president. Other officers are P. H. McDonald of New Albany, vice president, and M. H. Gunner of Tupelo, secretary-treasurer.

The group generally agreed that "ultimately, some form of government control would be enacted," and in order that the producers might have a voice in the legislation, the group voted as being "in favor of federal production control at the farm level."

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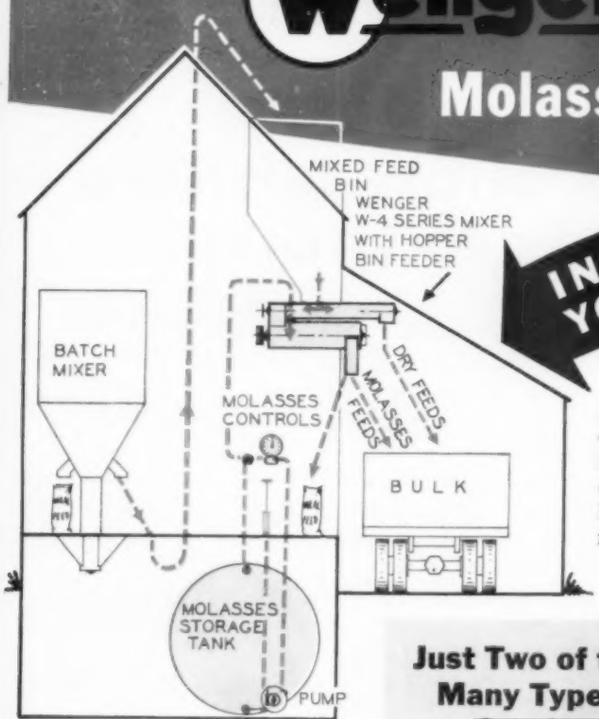
WITH Wenger W-4 SERIES Molasses Feed Mixer

INSTALLED OVER YOUR DRIVEWAY



Apply molasses to meal feeds as feeds are loaded into bulk trucks, or convey back inside of feed mill for molasses feeds to be delivered in bags. Application of molasses just as feeds are delivered into bulk trucks eliminates problems of storing molasses feeds in bulk tanks.

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ABOVE: W-4 Series Hopper Bin model available (optional) with reversible feeder, as above. Hence may deliver mixed feeds to the molasses mixer, or into bulk trucks directly for those feeds to be delivered in meal form without molasses. Models available from 3 tons to 40 tons per hour.

RIGHT: W-4 Series Molasses Feed Mixer equipped with an inclined auger feeder, and charged from vertical batch mixers. Eliminates need for an elevator leg. Models available with inclined auger feeders with capacities from 3 to 18 tons make outstanding installation in custom shops.

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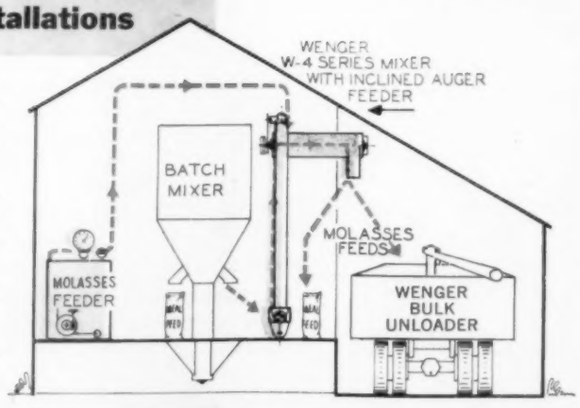

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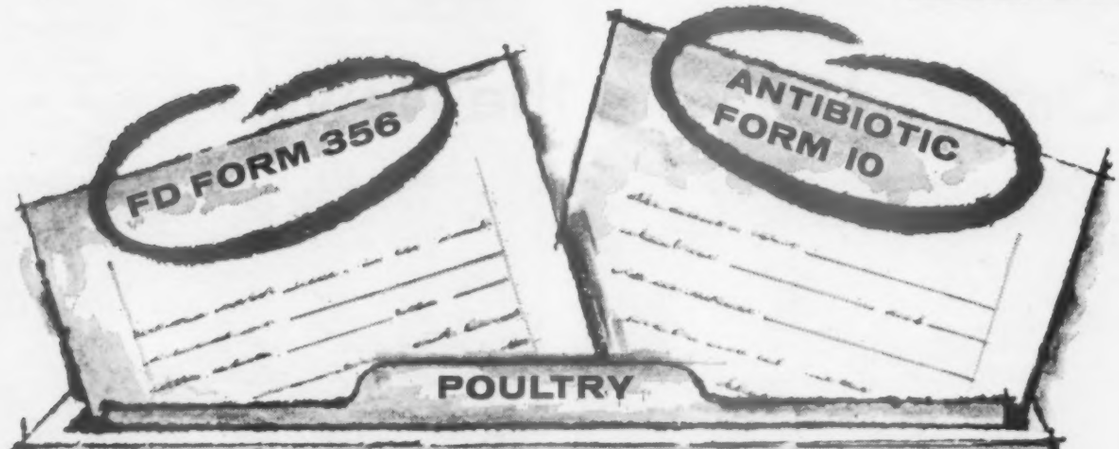

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Camera Views of the News ★ ★ ★ ★ ★ ★

SOUTHEASTERN FEED PRODUCTION SCHOOL WORKSHOPS — Small groups engaged in concentrated workshops featured the Southeastern Feed Production School at Athens, Ga., this year. Emphasis was on maintenance, quality control and other cost factors in the production line. Shown here are candid shots of the production men at work. In the first photo are men attending a shrinkage workshop—Wendell Mann, Chattanooga, Tenn.; Marvin Kuhns, Nashville, Tenn.; Bill House, Gainesville, Ga.; Henry Fuller and Harold D. White, both of the University of Georgia.

The second picture shows another group. Left to right, they are: Marlin B. Shiver, Atlanta, Ga.; Paul Braden, Zephyr Hills, Fla.; Lamont Nuckolls, Dalton, Ga.; Wilburn Fielding, Decatur, Ala.; Dr. M. L. Jones, University of Georgia, and Wilford Farmer, East Point, Ga.

HAMMERMILL WORKSHOP—These two groups studied hammermills at the Southeastern Feed Production School. From left to right in the first photo are: George H. Deadwyler, Gainesville, Ga.; Fred Conklin, Decatur, Ala.; John Rae, Hammond, La., and James Belt, Laurens, S.C. Left to right in the second picture are: Denis Parsons, Minneapolis; John Barefoot, Raleigh, N.C., and Eugene Wright, Gainesville. Workshop instructor at right is Bob Olson, Jacobson Machine Works, Minneapolis.

OTHER WORKSHOPS IN SESSION—The first photo shows a micro-mixing workshop in session at Southeastern Feed Production School. Pictured in photo are: Robert E. Hellwig, Tifton, Ga.; Ed Rowland, Minneapolis; Bob Brunson, Minneapolis; Charles Ware, Bay Springs, Miss.; W. K. Jones, Douglasville, Ga.; John Owen, Decatur, Ala., and Tom Wright, Dalton, Ga. Quality control was the topic discussed by workshop students shown in the second photo. From the left, they are: Carl Knopf, Birmingham, Ala.; Ramon F. Cana, Puerto Rico; Harry Bevil, Tunnel Hill, Ga.; Louis F. Ayers, Gainesville, Ga.; Larry Sailors, Gainesville, and Leroy Barrett, Dahlonega, Ga.

PHOTO SCENES FROM PET FOOD INSTITUTE CONVENTION—These photos show informal scenes captured by the lens at the recent Pet Food Institute convention in Chicago. The first photo shows representatives of General Mills, Inc., Minneapolis. Left to right, they are: D. S. Carver, Gary S. Grimes and Ed Schwab. Signing in at the Pet Food event are (second photo): H. L. Schilt (left) and Dr. James E. Corbin, both of Ralston Purina Co., St. Louis. Third scene pictures Dr. Harry Robertson, Atlanta, Ga. (left), and Kenneth Sanderude, Wenger Mixer Manufacturing, Kansas City, conversing. The registration picture (fourth photo) shows L. C. (Roy) Risberg, Ryde & Co. Discussing the pet food business in the last picture are Ralph Lee (left), Ralph Wells & Co., Monmouth, Ill., and C. B. Tallman, Waverly, N.Y.

GRAIN FEEDING

(Continued from page 44)

men; aid in bull proofs, and aid in the selection of high potential cows to use in milk production studies. A testing program is necessary for successful heavy grain feeding.

RECOMMENDED FEEDING RATES—Don Hillman—Grain feeding tables and "thumb rules" are, at best, only guides. Adjustments for individual cows and differences in roughage quality are often necessary. The following plan is suggested as a starting point:

Before Calving—Feed about 1 lb. of grain for each 100 lb. body weight of the cow for at least two weeks prior to calving and continue for four days after calving. A longer pre-feeding period may be necessary depending on the condition of the cow.

After Freshening—(a) Continue 1 lb. of grain per 100 lb. body weight for four days. (b) After four days increase grain 1 lb. for each 3 lb. of milk above 30 lb. per day. (c) Continue to increase grain as long as the cow continues to increase in production. When the cow ceases to increase in milk production with increased grain feeding, continue feeding at this level as long as she maintains milk production. (d) For every 3 lb. drop in daily milk production, decrease grain 1 lb. daily.

TABLE 12. Feeding of High-Yielding Dairy Cows (21), 365 Day Lactation Records

Cow	4% fat-corrected milk	Body weight	Increase in weight
	lb.	lb.	lb.
187	28,142	1,594	99
255	27,282	1,605	174
279	25,796	1,678	148
242	23,697	1,373	64
218	23,735	1,367	79
155	24,954	1,453	181
294	23,446	1,717	134
177	23,660	1,459	179
272	22,582	1,488	190
178	20,097	1,473	309
Average	24,341	1,521	157
Second year 11 cows averaged	25,622		77

A day's ration for the highest yield:
52 lb. sugar beets
31 lb. grass silage
7 lb. hay
40 lb. concentrates

Grain Feeding Schedule

Milk/day	Grain/day	Milk/day	Grain/day
lb.	lb.	lb.	lb.
30	12	66	24
36	14	72	26
42	16	78	28
48	18	84	30
54	20	90	32
60	22	96	34

The protein content of the grain ration should be adjusted to balance the kinds of roughages being fed.

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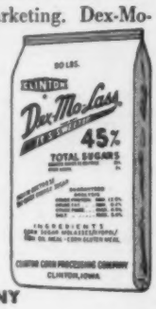

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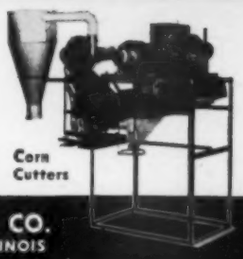

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Announce Program for N.C. Nutrition Event

RALEIGH, N.C. — Program topics and speakers for the Dec. 7-8 Animal Nutrition Conference at North Carolina State College, School of Agriculture, have been announced by Dr. Harold A. Ramsey, publicity chairman.

They include the following:

"Energy and Its Effect Upon Performance in Poultry," Dr. L. D. Matterson, poultry science department, University of Connecticut, Storrs; "Calcium and Phosphorus Requirements of Broilers and Poults," Dr. H. T. Peeler, International Minerals & Chemical Corp., Skokie, Ill.; "Recent Developments in the Nutrition of Dairy Cows," J. C. Thompson, Ralston Purina Co., St. Louis; "Should We Cater to the Animal's Sense of Taste?" Dr. M. R. Kare, department of physiology, School of Veterinary Medicine, Cornell University, Ithaca; and "Nutrition in Relation to Environment," Dr. C. A. Bottorff, American Cyanamid Co., Princeton, N.J.

Other topics and speakers, all from North Carolina State College, include "Copper, Iron and Zinc in Chick Nutrition," Dr. C. H. Hill, department of poultry science; "Energy and Protein Levels for Gestating Gilts," Dr. A. J. Clawson, department of animal industry; "All Concentrate Rations for Beef Cattle," Dr. M. B. Wise, department of animal industry; and "Dilution of Milk Replacers for Calves," Dr. J. P. Everett, Jr., department of animal industry.

Program chairman for the conference, which will be held in the College Union Building, is Dr. J. W. Kelly, department of poultry science.

This hog has 463 hungry dependents

. . . and they cost the average midwestern hog farmer $3 for every pig he raises. A recent study revealed some startling facts about worm damage. 101 hogs (rated as standard for healthy swine by veterinary inspection) were slaughtered and worm counts performed.

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USDA Researchers Develop Device to Indicate When Grain Bins Are Full

WASHINGTON — Researchers in the Agricultural Marketing Service of the U.S. Department of Agriculture have developed a mechanical device to warn grain elevator operators when a grain bin is full.

USDA says the new device is designed to save time and manpower and points out that it is inexpensive and easy to build.

Noting the ease of using the device, the department announcement said, "It takes one man one minute to install and remove the indicator from a bin."

The Transportation and Facilities Research Division of AMS says that without this device, an elevator employee must keep a constant watch on each bin as it fills and then signal another man below to turn off the grain near the end of the filling operation.

The AMS division says that "without either precaution, overflowing grain means plenty of labor in shoveling and cleaning up. Modern handling equipment is capable of piling up grain at a rate of 100 bushels a minute and more. In a matter of minutes an overflowing bin in an elevator gallery can spill grain the full length of the gallery belt. Overfilling a headhouse bin can clog and stop the supplying leg."

The development of the new device is related as follows:

AMS engineers studying grain receiving and turning operations at various elevators were soon convinced of the need of an indicator to sound a warning when a bin was nearly full. They also knew that it had to be a device that was simple, portable, inexpensive, rugged and of explosion-proof electrical construction.

A pilot assembly was developed by the engineers (Figure 1). The sensing element consisted of an "on-off" electrical pressure switch actuated through a large metal disk. This element was purchased as a preassembled explosion-proof unit. The switch was fastened to a steel mounting plate and in turn to the end of a 5 ft. length of ½ in. (.840-inch outside diameter) standard steel extension pipe. A short section of 1 in. pipe to serve as a sleeve was welded in an upright position to a steel angle frame.

The sleeve was fitted with a hand tightening screw so that the extension pipe could be clamped inside the sleeve. A removable weight was used to anchor the steel angle frame. An electric cord was run from the pressure switch through the ½-inch pipe to a warning horn.

The portable indicator was readied for operation by placing the angle iron holder with weight alongside the bin fill hole so that the pipe sleeve extended over the edge. The extension pipe was clamped in position so that the pressure switch projected into the bin the desired distance (anywhere from one half to 3½ ft.) but was out of the path of the grain flowing into the bin. The warning horn was placed near a station of an intercommunication system. The electric cord from the pressure switch was connected to a plug-in of the warning horn circuit.

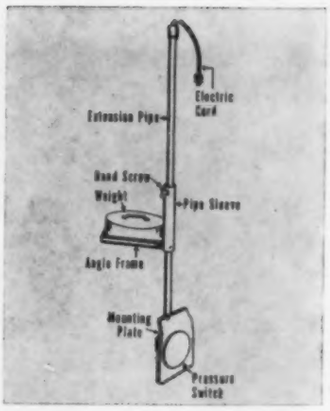

FIGURE 1—Researchers at the Agricultural Marketing Service of the U.S. Department of Agriculture say that it takes just one minute to install and remove this "full bin" indicator for grain storage bins.

In operation, bin filling continues so long as the grain level is below the pressure switch. The warning horn sounds as the grain level rises and contacts the switch (see photo). With the intercom-station open, the sound is relayed to various parts of the elevator signaling the operator to shut down the filling operation.

At elevators with no intercommunication system, wiring can be extended and the warning horn placed downstairs near the driveway. This permits employees to hear the horn above the noise of the operating machinery.

Test Conductor

A test was conducted before and after the indicator was installed. With no indicator, the time required for a man to go from the elevator office (located in the headhouse at ground level) to the manlift, up the manlift, to a bin, measure the bin, and return to the office, was 5.3 minutes.

This did not include the time usually spent by the man in waiting by the bin near the end of a filling operation ready to signal another man below to turn off the grain. With a portable indicator, one man installed and removed the indicator from a bin in one minute.

The pilot assembly developed by AMS engineers proved completely satisfactory during the one season it was observed in operation. And so did similar models that were built by operators of country elevators.

INDICATOR—This photo shows the "full bin" indicator developed by the researchers at the U.S. Department of Agriculture Agricultural Marketing Service in action.

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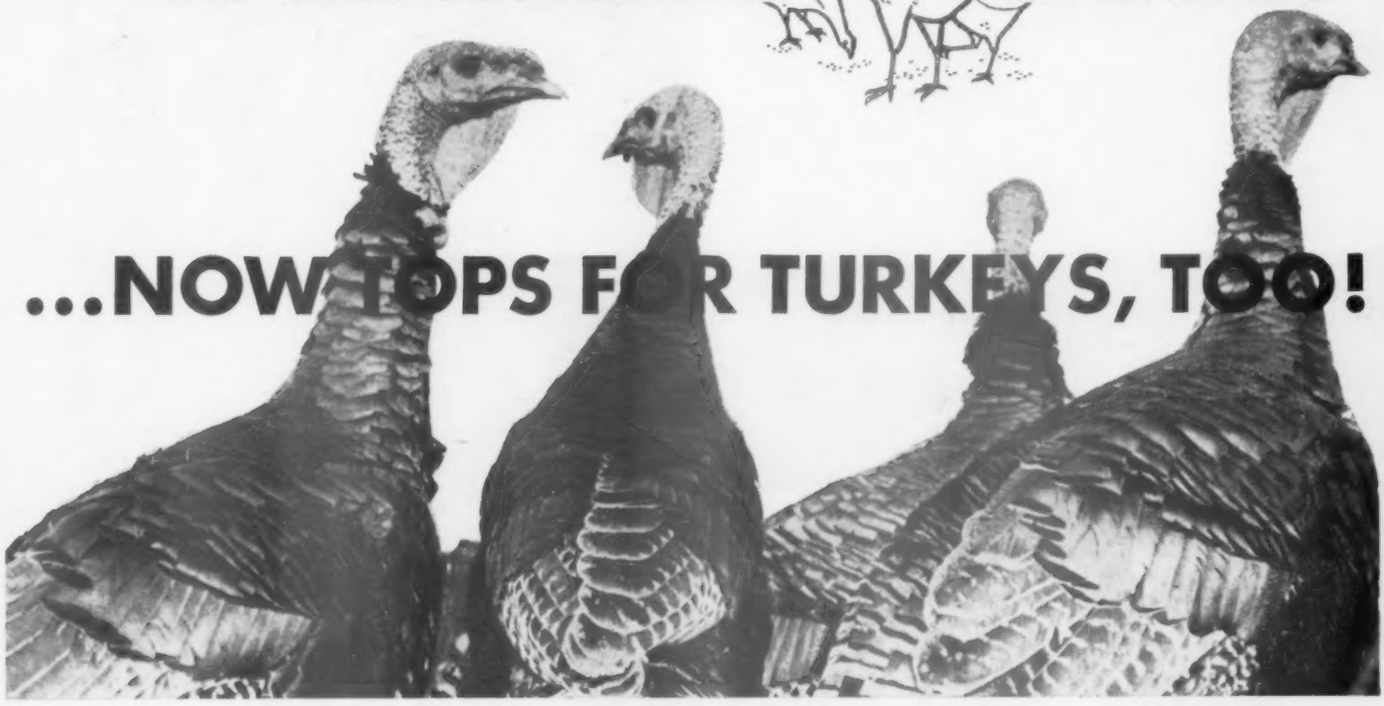

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AMPROL is highly effective against the three economically important coccidial species: *Eimeria adenoeides, E. gallopavonis* and *E. meleagrimitis.*

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AMPROL allows satisfactory weight gains, with very favorable feed conversion ratios.

AMPROL, at a use-level of 0.0125%, helps prevent coccidiosis in a unique way by depriving coccidia of the thiamine they need to live. However, at this level AMPROL will permit the establishment of a *sound immunity.*

AMPROL permits you to stock only one coccidiostat for both broilers and turkeys.

AMPROL gives full coccidiostatic activity... coccidia have not been shown to develop resistance to this coccidiostat, yet it is well tolerated at many time the recommended use-level and is nontoxic to farm animals.

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Add AMPROL to your feeds to give your turkey-grower customers the most coxy protection for their money!

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Studies on Fattening Beef Calves Told

STILLWATER, OKLA.—Oklahoma State University researchers here have announced preliminary results of three experiments initiated in the fall of 1960 to study different aspects of fattening rations for steer calves.

Dr. L. S. Pope, Kenneth Urban, Fred Harper and Dr. George Waller pointed out that while all trials are still in progress, and only preliminary results are available, certain trends may be observed. Their trials are on supplements to high-milo and all-barley rations, grinding vs. steam rolling milo and implanting with different amounts of stilbestrol.

Their reports on trends follow:

Calves fed steam-rolled barley without additional roughage tended to outgain those fed steam-rolled milo plus a small amount of cottonseed hulls. In addition, barley-fed calves appear to be fatter. A complex mineral and vitamin A proved superior to soybean meal fortified with calcium and vitamin A in either milo or barley rations. The addition of more total "ash" or minerals to the ration appeared beneficial where barley was fed, but not with milo. Best overall results have been obtained with steam-rolled barley and a complex supplement—plus a small amount of additional cottonseed hulls.

In pelleted rations containing 63% ground or rolled milo, the addition of a complex mineral mix improved gains slightly.

In further experiments, mixed rations containing 50% milo in fine ground form proved superior to the same mixtures containing coarsely ground or steam-rolled milo. Less difference between milo preparation was apparent when the rations were pelleted. A ration containing 74% steam rolled milo and no roughage other than 8% dehydrated alfalfa meal proved superior to one containing only 50% steam-rolled milo, with dehydrated alfalfa meal and cottonseed hulls as the roughage. Approximately 13% less feed was required per hundredweight gain with the "all concentrate" milo ration.

Implanting eight to nine month old calves with 24 mg. stilbestrol at the start of the trial improved gains, with no overall effect on carcass quality. Implanting with 12 mg. appeared to give less response with 24 mg. stilbestrol.

Grain Report Starts

WASHINGTON — A new monthly report combining information on truck and rail shipments of grain into California was started Sept. 13 by the Federal-State Market News Service in Sacramento, Cal., according to the U.S. Department of Agriculture.

Persons who wish to obtain copies of the reports may request them from Norman Munson, Federal-State Market News Service, 1220 N. Street, Sacramento 14, Cal.

400 View Texas Firm's New Facilities

WINTERS, TEXAS — About 400 persons attended the public open house of the Alderman-Cave Milling Co. here recently to view the $250,000 push-button feed mill and grain storage facilities.

A five-piece string band entertained. Hosts were the mill owners, Ray Alderman of Baird and his father-in-law, Charlie Cave of Blackwell. Also on hand to greet the guests and show them through the plant were representatives from associated mills in Ft. Worth.

The plant now has 130,000 bu. storage capacity. A control console with push buttons can direct and move grain and feed to any machinery or feed bin in the mill. Altogether, the mill can make 14 different kinds of feed for sale.

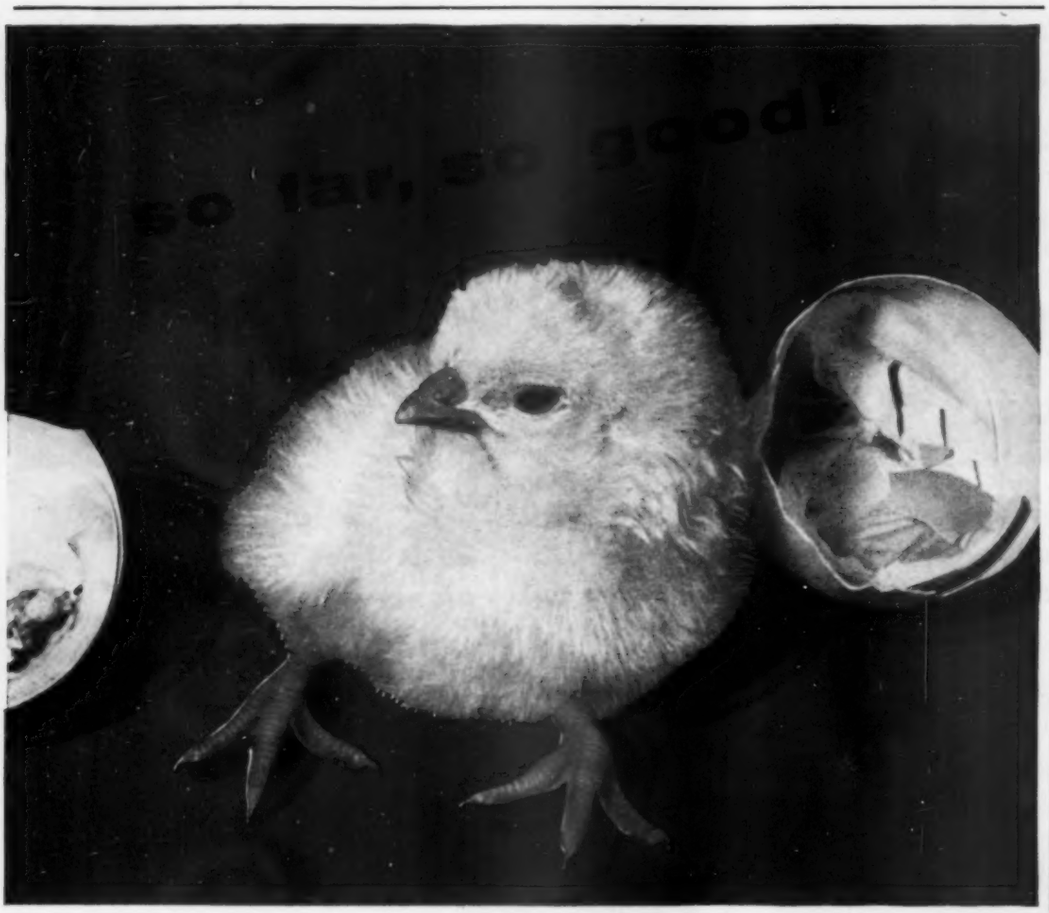
The original plant was built by the late C. L. Green in 1917. Mr. Alderman and Mr. Cave purchased the property for $51,000 on a bankruptcy sale last February, then spent another $125,000 in improvements and new equipment.

Protein Blenders Event

IOWA CITY, IOWA — More than 150 BP feed dealers from Iowa and Illinois attended a two-day feed seminar and social event sponsored by Protein Blenders, Inc., Sept. 29-30 in Iowa City.

Featured during the sales and nutritional conference program were Dr. Spencer Morrison, BP feed nutritionist, and Verne R. Martin, former general sales manager for the Maytag Co., Newton, Iowa.

The 200 BP dealers and company employees were entertained at the annual BP Football Blender. Climaxing the two-day affair was the group's attendance at the Iowa-California football game.



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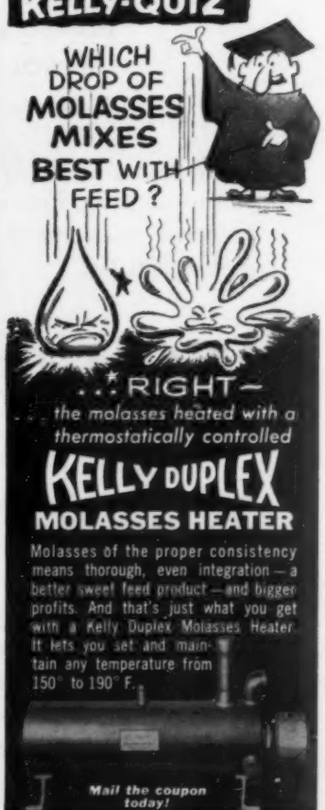
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FEEDSTUFFS

USDA Tests Grain Fumigation Techniques At Kansas Sites

WASHINGTON — Fumigants, no matter how effective, cannot kill insects in stored grain unless they penetrate the grain mass to all points where the insects are doing their damage, reports the U.S. Department of Agriculture.

"This point is well recognized in grain-storage circles," say USDA officials, "but what is the best way to distribute a chemical to all parts of a bin?" The USDA has this to report:

Market entomology research workers of the Agricultural Marketing Service have just completed a series of tests on the problem. They compared insect "kill" under three methods of application—gravity penetration, single pass of the fumigant and closed recirculation.

In each trial, the closed recirculation method was found most satisfactory: The chemical was forced into hard-to-get-to spots in the bin by actual count, insect mortality was considerably greater; and safety of application was increased because workers did not have to enter the bins, sealed during treatment to minimize loss of the fumigant.

The tests were conducted by scientists of the Stored-Products Insects Laboratory of the Agricultural Marketing Service, Manhattan, Kansas, at various wheat-storage sites in Kansas, in cooperation with grain bin manufacturers and chemical companies.

In all tests, each method of fumigation was tried in identical flat-storage 100,000-bu. structures. Methyl bromide was the chemical used at a rate of 2 lb. for each 1,000 cu. ft. of space, in all cases.

Flour beetles and rice weevils in cages containing wheat were placed in the grain mass at 2½, 5, 10, 15 ft. and floor levels in each of 20 locations in the bins.

Concentration of the fumigant was checked at one, four, eight and 24-hour intervals after the chemical was introduced. Mortality counts on the flour beetles were made immediately after the 24-hour period and two weeks later; mortality of the rice weevils was checked at six weeks after the trials.

Results: The closed recirculation method produced a higher insect kill and a much more uniform distribution of the fumigant throughout the grain mass. Mortality of both insects averaged above 99% in the first phases of the tests by this method. Data won't be complete until the six-week incubation period for the rice weevils has elapsed, USDA officials said.

Honeggers' Plays Host To Kansas Visitors

FAIRBURY, ILL. — Officials of Honeggers', Fairbury, played host recently to a group of Kansas guests who arrived here by train for a tour that included a visit to 55 Livingston County farms and the 600-acre Honegger research farm near Forrest, Ill.

The farm tour included visits with poultry raisers, cattle and hog feeders, sheep producers, dairy men and operators of fully diversified farms.

At the Honegger farm, the group observed work in producing Honegger chicks. It also learned of the firm's research programs for livestock. Over 1,000 hogs are farrowed and fed out annually on different research feeds and programs. A large number of cattle experiments are also conducted here each year.

The event, which included a charcoal dinner and early morning "farm" breakfast, was climaxed with a tour of the Honegger feed mill in Fairbury. The electronically controlled mill produces 500 to 600 tons of feed per day.

PRODUCTION SCHOOL SPEAKERS—Record systems for operating control and standards for receiving, processing, pelleting, bagging and loading equipment were discussed by these men at the 1961 Feed Production School. The first photo shows (from left): First row—Will Brooks, Illinois Farm Supply Co., Springfield, Ill., and Roy A. Robinson, California Pellet Mill Co., Crawfordsville, Ind.; second row—William L. Hamilton, Richardson Scale Co., LaGrange, Ill.; Walter Monti, Illinois Farm Supply Co., Bloomington, Ill., and Louis Bosso, Feed Production School, Inc. In the second photo are (from left): Charles Glenn, Midwest Research Institute, Kansas City; Joe W. Sloan, Cosby-Hodges Milling Co., Birmingham, Ala.; Carl J. Vosloh, Jr., U.S. Department of Agriculture, Washington, D.C., and Dr. Richard Phillips, Iowa State University.

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"Pig Caller"®

Aroma Additive for Pig Starters that definitely increases feed consumption!

Now available to feed manufacturers is a new non-nutritive additive for pig starter feeds that gets pigs on dry feed early, makes them eat more during the critical early growth stages!

New PIG CALLER is a powder that can be easily and economically added to any pig starter formula. As a replacement for sugar and flavor products it reduces considerably the per ton ingredient cost of pig starter and makes it easier to pellet. Used along with sugar in the formula PIG CALLER serves as a further feed consumption stimulant. Tests have shown that PIG CALLER is a more effective consumption stimulant than flavor additives.

RATION PREFERENCE TEST RESULTS

Suckling Pigs:	Lbs. Feed consumed
Lot #1 (Four sows, 26 pigs)	
Choice of two rations:	
(1) 5% sugar added	95
(2) 5% sugar plus 2 lbs. PIG CALLER added	831
Lot #2 (Five sows, 45 pigs)	
Choice of two rations:	
(1) 5% sugar added	267
(2) 5% sugar plus 2 lbs. flavor added	683
Lot #3 (Five sows, 41 pigs)	
(1) 5% sugar plus 2 lbs. flavor added	320
(2) 5% sugar plus 2 lbs. PIG CALLER added	413
Weaned Pigs:	
(Test lot of 39 pigs from 5 sows)	
Choice of three rations:	
(1) Basic (no sugar, flavor or PIG CALLER)	113
(2) Basic plus 5% sugar added	306
(3) Basic plus 2 lbs. PIG CALLER added	408

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JOE BROOKS

BY AL P. NELSON

Eggs Can Be Promoted

Lars Anderson, a tall, thin bodied Swede, walked into the farm store of the Brooks Mill with the odd, hesitating gait peculiar to some of his countrymen. In his right hand he carried a folded piece of paper with shirred edges.

"Hello, Lars," greeted Pop Henley. "How're your layers getting along?"

"The old ones are layin' and the pullets will soon go into production," Lars said with a friendly grin. "Is Joe around?"

"Sure, he's right in the office," Pop said, pointing.

Lars ambled toward the door of the partly glassed-in office, and opened it quietly. Rusty Hagen, the bookkeeper, and Joe were both busy at their desks. Through the room came the gentle hum of an air conditioner.

Joe looked up. "Hi, Lars," he smiled. "How are you?"

"I'm pretty good, Joe," grinned Lars. "Hannah and I just got back from a long trip to New England to visit her folks. By golly, Joe, I visited a lot of chicken farmers in Pennsylvania and New England. They are giving us lots of competition."

The brown haired feed dealer nodded. "There's competition in eggs all over the country. And in most other things. It's the trend of the times."

Increasing Egg Consumption

Lars chuckled. "Yes, that is why we have to get people to eat more eggs, Joe."

"Sure, but how do we do it," Joe asked. "I think almost everything has been tried by lots of smart people."

Lars smiled. "Yes, well maybe not all, Joe. When a fellow goes into a restaurant for breakfast in the morning, he doesn't always know what he wants, does he?"

Joe shook his head. "No, he asks for a menu."

Lars smiled wider than ever. "Yes, sure, that's it. Now what we aim to do is make that fellow who sits on the restaurant stool think of eggs first before he thinks of oatmeal, pancakes and other foods."

"You're right, Lars. But how do we do it?"

A confident light rose higher in Lars' blue eyes. He began unfolding the piece of white paper in his hands. It turned out to be a restaurant place mat.

"Hannah and I got off the turnpike one night to take a motel room," he said slowly, "and then after we got a good night's rest, we went to a restaurant for breakfast. We bought ham and eggs, and it was a dandy meal, Joe. The fellow who waited on us put this place mat in front of every diner."

Idea From a Place Mat

Lars handed Joe the place mat. It showed a picture of a rooster happily bearing an egg to a diner. Headline of the copy said:

"HOW DO YOU LIKE YOUR EGGS?"

"If you like them hard boiled—you are persistent, dynamic, sincere; if soft boiled—gentle, patient, kind; medium boiled—calm, cool, collected; poached—speedy, peppy, intelligent; scrambled—artistic, nervous, passionate; turned over—versatile, magnetic, dominant; sunny side up—healthy, happy, wise; shirred—fastidious, romantic, sensitive; and if you like omelet—you are sturdy, reliable, conservative.

"Take me with you. Courtesy of Zinn's Modern Diner restaurants, Rt. 30 between Coatesville and Downington, Pa."

Joe began to chuckle. "Quite a place mat, Lars. I like it so much I'd like to run it through my duplicating machine and get a copy to post on my bulletin board. I think lots of farmers would like to read it."

Lars looked happy. "Now you have your head workin', Joe. I can see that you grab ideas quickly. Are you ready to listen some more?"

"I certainly am," Joe said.

Lars crossed his long legs. "Well, I was figurin' that we could write to the fellow who makes these mats and ask for some more samples. Then we could go to the restaurants and the hotels around here and ask them to buy these place mats and use them."

'So that people who eat out will want to eat more eggs, yes?"

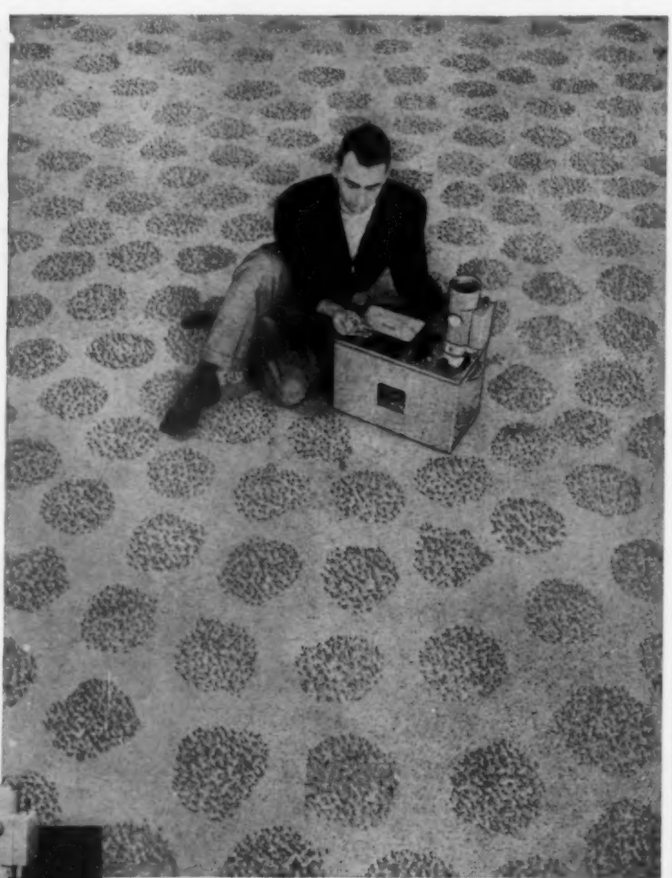
"Yes, sure," said Lars. "I'm the fellow who raises the eggs. You are the fellow who sells me the feed so I can produce eggs. We should work together, yes?"

Joe nodded. "And how about this? Suppose I take a copy of this to our district feed dealers' meeting and tell them about it, like you told me. Perhaps I can get them to visit restaurants in their trade area and sell some mats."

Lars grinned so widely he showed a couple of big gold inlays. "Yes, that fellow who makes the mats should give us a commission, yes, Joe?"

"That would be nice," Joe agreed, "but I guess we'll just have to settle for the sale of more eggs and feed."

"Yes, Joe, you stick to the feed



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and I'll stick to the eggs. I like producing eggs much better."

Joe chuckled. "Well, Lars, if more farmers would keep their eyes open for marketing opportunities, the better it would be for them and us. You just keep looking for more ideas to boost the sale of milk and eggs."

Lars leaned forward. In a lower voice he said, "Only one thing bothers me, Joe. On that trip East—at the filling station and in the turnpike eating places, by golly, I saw some mighty pretty looking women. And Joe, once in a while I took a second look. At home on the farm I never worried about such things. I work hard. Am I going off the deep end, Joe? I love my Hannah, but I couldn't help looking."

Joe smiled and shook his head. "Lars, you did nothing wrong. Don't worry. But if you don't want to look —that's when you should start to worry."

Lars straightened and got up. He looked vastly relieved. "You have made me feel much better, Joe. By golly, we are partners in more ways than one. I need some more feed for my layers. Pull some grain out of my grain bank account, will you, and shoot me a 5-ton load of feed? I must meet Hannah at the shoe store."

Washington Meeting Program Announced

SEATTLE — "Feed, Management and the Gene in Relation to Meat Quality" is one of the major topics on the program for the annual Animal Industry Conference to be held at Skagit Valley College, Mt. Vernon, Wash.

Speaking on the subject will be Dr. Alex Wood, University of British Columbia, according to announcement on the program from John G. Wilson, manager of the Washington State Feed Assn. The meeting will be held Nov. 13 and 14.

Other topics and speakers include: "Growth and Development of Animals," Dr. Alex Wood; "Use of and Value of Various Hormones in Animal Agriculture," Dr. R. E. Erb, Washington State University; "Influence of Pelleting on Energy Content of Feed and Nutrient Requirements of Poultry," Dr. Leo Jensen, Washington State University, and "Response of Cows to High Level of Grain Feeding," Dr. F. R. Murdock, Washington State University.

Research briefs to be presented by Washington State University personnel at the meeting include: "A Comparison of Dried Molasses Beet Pulp with Molasses Concentrated Steffins Filtrate Beet Pulp as a Feed for Dairy Cows," Dr. T. H. Blosser; "Effect of High Levels of Vitamin A on Egg Yolk Color," Dr. L. R. Berg; "Effect of Calcium Level on Hatchability of Eggs from Young Breeder Hens," Dr. L. R. Berg; "Feeding Tests with Broilers," Dr. L. R. Berg; "Vitamin D and Egg Production," Dr. James McGinnis; "Laboratory Determination of Protein Quality," Dr. James McGinnis; "Effect of Dipping Turkey Eggs in Antibiotic Solution on Hatchability," Dr. Leo Jensen; "Factors Influencing Response to Enzyme Supplementation," Dr. Leo Jensen, and "Effect of a Tranquilizer on Fryer Growth, Feed Efficiency and Behavior," Gordon Bearse.

Rail Feed Rate Cut

HELENA, MONT. — Railway freight rates on all types of processed and concentrated livestock feed moved between Montana points have been cut approximately 50%.

John Willard, Montana Railroad Assn. director, cautioned against confusing the rate slash with a previous drouth emergency reduction.

These are cuts of about 40% on hay and straw feeds, and a permanent reduction from 3 to 24¢ cwt. on grain moving from Montana to the West Coast and Midwest markets.

Although the latest rate reductions are permanent, they were made effective on an emergency basis to meet needs of farmers and ranchers shipping feed for drouth-affected livestock.

NEW MANAGEMENT

SCOTTSDALE, ARIZ. — Rancher's Feed & Supply Co. is now under the new management of Edwin Curtis.

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3. "The weight gain response to zinc bacitracin was not as good as the response to bacitracin methylene disalicylate*.

4. "Penicillin gave the poorest response of all antibiotics tested."

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The Outside Salesman Is a Professional

The Outside Salesman Must Be a Service Man, Planner, Guidance Counselor to the Farmer, Nutrition Expert and Sometimes Delivery Man.

By Al P. Nelson
Feedstuffs Special Writer

There are still some feed dealers and custom mill operators who do not have outside salesmen these days, but there's a trend in the industry to have a competent salesman visit prospects and customers regularly in a trade area. More feed men in the Midwest area are devoting more attention to the matter of outside selling.

This brings up the question: What is an outside salesman?

"Don't call him an outside salesman," one dealer told me. "He's got to be more than that. He must be a service man as well. He must be a planner, a guidance counselor to the farmer, plus a nutrition expert. And in many instances he must be a delivery man. He must also know enough about the feed mill's operation so that he can pinch hit in almost any personnel capacity if the need arises."

This dealer went on to say that the feed industry salesman differs from the men who sell appliances, farm machinery and other items. These men know their products, and they sell. But most of them do not service, nor do anything comparable to the multiple duties of a feed salesman, he commented.

"You can't find a good outside salesman these days," one feed man complained. "They just don't know how to sell and service. And they expect big pay for little work."

Hiring Criteria

According to many dealers who have successful outside selling operations, the failure or success of this phase of the business often depends on the feed dealer himself. Here are some of the things every dealer should consider when hiring an outside salesman, according to over 40 dealers interviewed on a recent field trip through Wisconsin, Illinois, Iowa and Missouri:

(1) Conduct a thorough interview. Learn all you can of an applicant's background and study his references and investigate them. Try to learn his attitudes toward selling and his desire to make a record for himself and for you. The salesman must have the desire to work toward goals which will yield him greater income. He must not be a payday type—who just fills in time.

Ask him, too, whether he'll work evening hours when necessary to contact prospects.

(2) Outline your products and your policies. Every man who sells needs a thorough briefing on the company for which he works, the products it makes and sells, and its policies toward employees and customers. Allow the applicant time to ask you questions to clarify specific points. Ask him some questions about feeding, so you'll be able to gauge his nutritional knowledge.

Explain your territory and indicate to him exactly what you want him to do. Many a salesman fails because the feed man puts him on his "own" so to speak. Let him work for you, not just for himself. You're paying the bill, so see that the salesman does what you want him to do.

(3) Train him. No matter if the salesman has had some previous experience in selling feeds and other farm supplies, put him through a training period. Make it a thorough training, so that he'll know what you think and what objectives you have. Be sure he has your nutritional point of view.

(4) Try to have daily sessions with your salesman, preferably every morning. Have him report his previous day's calls and problems, and help him set up his schedule for that day. Such a daily meeting will help him to become a better salesman. Too, he'll know you are vitally interested in the job he is doing and that you expect results. If he has gripes, he can get them off his chest at such daily meetings. He won't carry them around for weeks, as would be the case if you let him operate on his own.

As he reports his successes and problems to you, your comments on what can be done to handle certain situations will aid him in meeting future situations. He'll feel you and he are partners in this outside selling job.

(5) Let him spend one day a week at the mill and store, selling at the counter or doing some other job. This will acquaint him with over the counter selling, he'll meet many of his customers on a different level. This different experience will be valuable to him. He'll be able to explain to farmers when he gets back in the field just what your mill, feed and services are—especially as they relate to the mill operations.

(6) Use him as your principal collection man. This will teach him it is important to collect as well as to sell. It will teach him to be cautious about accepting questionable accounts just for the sake of a sale. Since he sells feed to so many farmers, it's his job to make the tough collections. Tell him to be sure to call back on farmers on the dates when they promise they will pay.

(7) Show him how to sell an annual feed program. Teach him how to figure a farmer's annual feed needs for livestock or poultry or both. Work out with him a method for estimating how much feed the farmer will use and at what cost. Thus, he and the farmer will be able to compare your feed costs with those of competitors, or even with a farm-mix cost. Some farmers are not going to adopt your feeding program for just a short period. But if you show them savings over a year, plus better nutrition, such figures may result in your landing a profitable new account.

(8) Make certain that the salary and commission you offer your salesman is adequate. Selling requires constant physical and mental effort, with much decision making. Reward your salesman for the results he accomplishes. Give him an incentive which will call forth his best selling powers to benefit him and you.

(9) Pat him on the back when he deserves it. Every employee wants praise in addition to his pay check. Never forget this.

(10) Offer to accompany him, when he wants you to do it, to visit some customer with a complaint or who wants special service. Thus your salesman will see how you do it. He may learn from this experience much quicker than he will from a conference with you on the same subject.

Your salesman is your representative in the field. Make him a selling ambassador who reflects you, your business and your policies. The result can be a happy and profitable one.

Extra Service

One Iowa firm that does a large business in hog feeds has one outside salesman who checks with hog raisers on their herds, feed needs, etc. Then, one day a week he brings another man with him to help weigh hogs. This second man, too, checks the feeders and the waterers to make sure they are working. This team will also castrate pigs for the farmer.

Naturally, such service is appreciated. The feed firm feels that the extra cost of sending the second man

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along several times a month really pays off in customer satisfaction.

"We find," says the outside salesman, "that the hog raiser begins to check his feeders, waterers, etc., more carefully after we have done it for him a few times and he watches us. Thus, in time, our work in this connection is less and we have taught the raiser a better management procedure."

Another field salesman reported, "When I offer to weigh pigs for our hog customers and set up a feeding record, this helps to establish me as a friend as well as a better salesman. Often farmers distrust salesmen, but when you get out and weigh their pigs for them and set up records and check on the pigs, you soon become a friend. And that is where your selling sometimes begins."

Figuring Annual Cost

The ability of a field salesman to help a farmer with his annual feed cost problem is an important one in today's market, many dealers say. One Illinois feed man told me that his salesman got a very fine hog feed account merely by estimating what a hog raiser had been paying for feed and then submitting a figure showing what the cost would be if the farmer bought feed from him. The salesman's figures showed a substantial saving in feed cost by utilization of a grain bank service, better record keeping and weighing of pigs to check gains. A further saving was made by showing the hog raiser that he could take advantage of such cash discounts at certain times of the year to reduce his feed costs.

One feed dealer has his outside salesman deliver all bagged feed, while the mill delivers the bulk feed. The idea here is that this bag delivery saves mileage, and it also enables the salesman to see his customer twice as often. On the delivery trip he can often get a repeat order for future delivery or have time to sell some other product the feed firm carries in stock.

Keeping in Touch

An Iowa dealer told me that he serves 600 customers each month, some more than once a month. He has set up a procedure whereby he assigns 200 calls to his outside salesman, 200 calls to an office manager and 200 calls to himself.

"We want to keep in touch with all customers at least once a month," says this successful feed man. "There isn't time to make personal calls on all 600, so we use the phone a lot. We try to pick a time when we know the farmer will be in. When he answers, we call his attention to some item he has, ask how his feed supply is holding out, or just chat. This method gets more sales for us. These farmers like to be remembered, even though they know we are trying to sell something. We recognize their importance as individual customers."

The 200 calls which each man must make, in person, by phone or even by handwritten postcard, are set up by the feed dealer and his two men on the basis of who knows who best. Each man has a list of the customers he contacts, and he checks them off day by day.

"Now if you'll step over here, I'll show you what I want you to do next."

"Believe me this procedure keeps us on our toes," says the dealer. "When we have a few moments' spare time, we are always conscious we'd better get busy and contact some of our customers, by phone, card or personal call."

Number of Calls

How often should an outside salesman call on a prospect to try to get business? That's a question dealers don't agree on.

One firm which features a special hog feeding program has a sales manager who says three calls are enough. If the prospect can't grasp the advantages of the special hog feed program in three calls, then he isn't capable of carrying it out, the manager says. He reports his outside salesman tries to concentrate on reaching and selling hog raisers who are in the top earning brackets. They are the most likely to consider and take on a carefully worked out cost of production program.

A Nebraska feed man who does most of his own selling says that he got a fat order from a cattleman on the eighth call. He had presented all the advantages of his feed and his service on each call, and he didn't think he was getting anywhere with this cattleman who is now a sizeable customer.

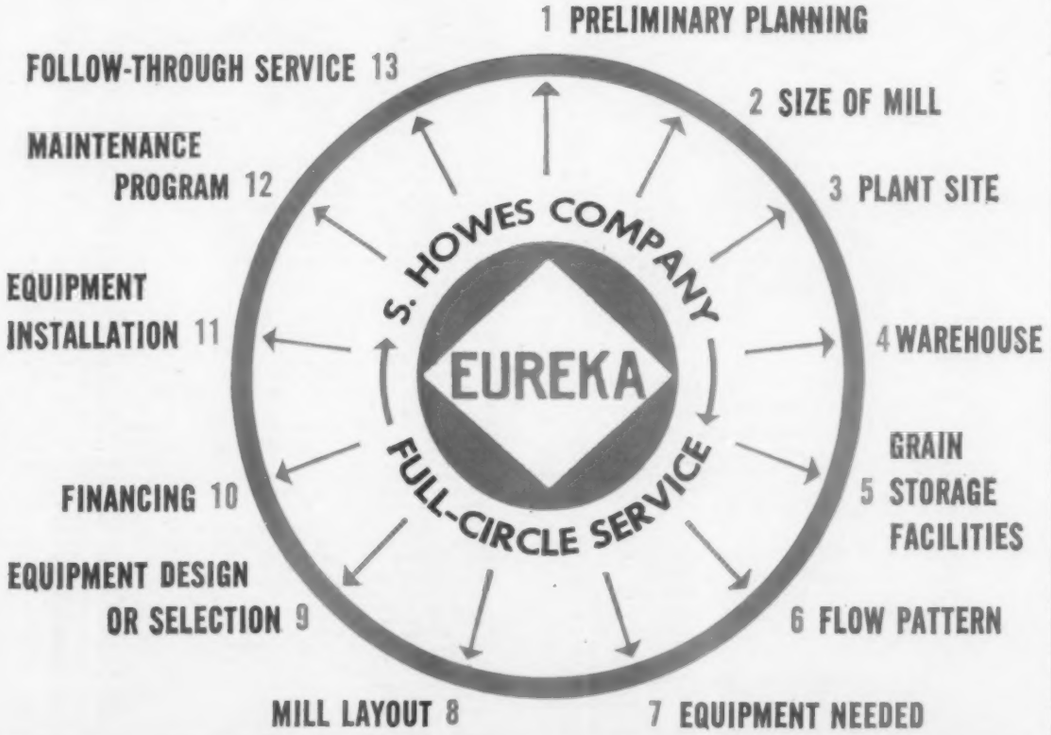
But on the eighth call the cattleman said, "You've convinced me, John. You are my feed supplier from now on."

There are still many feed men who say in effect, "I don't do much outside selling. The farmer is pestered to death with salesmen for all products, and he resents such calls. When they want feed they know we can give them good products and service. I try to sell them on a 100% supply basis when they come in for grind and mix. I do most of my selling in the store and mill."

But, as another feed man said, "The way to increase your feed volume is to hire a good outside salesman and cooperate with him in a planned program. He can reach many more farmers than I can reach from the mill, for I must spend most of my time here."

This country has been criticized for not doing a top notch selling job. Some feed men are trying to remedy this situation in their field by putting on good outside salesmen. It's a trend which undoubtedly will grow as competitive conditions demand.

IN THE CRUCIAL 60's



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For the Feed Manufacturer, Feed Jobber
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Monthly Index
August, 1961

Volume 33 Numbers 31-34

ALFALFA:
American Dehydrators Assn. ....Aug. 19—p 103
Barley-Alfalfa Ratios for Fattening Steers ....Aug. 19—p 48
Putting Research to Work ....Aug. 26—p 74

AMINO ACIDS:
American Society of Animal Production ....Aug. 19—p 26
Amino Acid Imbalance May Be Inhibiting Factor in Raw Beans ....Aug. 19—p 1
Putting Research to Work ....Aug. 12—p 56
Research on Lysine for Ruminants Told ....Aug. 19—p 56

ANTIBIOTICS:
Purdue Swine Day ....Aug. 26—p 10
Zoalene-Oleandomycin Cleared for Chickens ....Aug. 5—p 8

ARSENICALS:
Purdue Swine Day ....Aug. 26—p 10

ASSOCIATIONS:
American Dehydrators Assn. (Conference) ....Aug. 19—p 103
(Five Additional Groups to Get Grants-in-Aid) ....Aug. 19—p 33
American Feed Manufacturers Assn. (Prepares Industry Proposal) ....Aug. 19—p 53
(Public Relations Committee) ....Aug. 19—p 78
(Points Likely to Be Checked by FDA Inspectors) ....Aug. 26—p 91
(U.S. 6-Month Feed Tonnage Up 9%) ....Aug. 26—p 1
American Poultry & Hatchery Federation (Meeting) ....Aug. 5—p 6
Canadian Feed Manufacturers Assn. (Election) ....Aug. 5—p 11
Cincinnati Feed Club (Committee Chairman) ....Aug. 19—p 99
Delmarva Poultry Industry, Inc. (Against Controls) ....Aug. 26—p 6
Feed Production School, Inc. (Production Handbook) ....Aug. 26—p 8
Georgia Poultry Federation (Backs Freight Rate Cuts) ....Aug. 26—p 6
Grain & Feed Dealers National Assn. (Appointment) ....Aug. 26—p 6
Grain Processing Machinery Manufacturers Assn. (Appointment) ....Aug. 12—p 97
(Scholarship) ....Aug. 19—p 12
Illinois Feed Sales Managers Assn. (Election) ....Aug. 12—p 68
Mid-South Soybean & Grain Shippers Assn. (Officers) ....Aug. 12—p 97
National Broiler Council (Officers) ....Aug. 26—p 88
National Cotton Council (Promotion) ....Aug. 19—p 68
National Egg Council (American Poultry Congress) (Meeting) ....Aug. 5—p 14
National Egg Council (Growth Cited) ....Aug. 19—p 80
National Grain Trade Council (Grain Program) ....Aug. 19—p 105
National Soybean Processors Assn. (Meeting) ....Aug. 12—p 10
(Officers) ....Aug. 12—p 4
National Turkey Federation (Legislation Discussed) ....Aug. 26—p 1
(New Turkey Legislation) ....Aug. 26—p 86
(Marketing Orders) ....Aug. 12—p 1
Northeastern Poultry Producers Council (Brand Name Eggs) ....Aug. 12—p 7
(Pen Record Book) ....Aug. 26—p 82
Pennsylvania State Poultry Federation (Meeting) ....Aug. 5—p 34
Poultry & Egg National Board (Promotion Plans) ....Aug. 12—p 18
Poultry Science Assn. (Annual Meeting) ....Aug. 12—p 4; Aug. 19—pp 4, 6, 7
Southeastern Poultry & Egg Assn. (Exec. Secretary) ....Aug. 5—p 4
Virginia Turkey Assn. (Promotion of Turkeys) ....Aug. 5—p 80
West Virginia Poultry Assn. (Convention) ....Aug. 19—p 14

AUTHORS:
Bermender, H. W.
How Can Feed Suppliers Help Their Poultry Customers in Marketing or Increasing Their Net Returns? ....Aug. 26—p 18
Berry, L. N.; Francis, D. W.; Roberson, R. H.
Egg Production Characteristics of Pullets Managed Under Three Systems ....Aug. 12—p 40
Biely, J.; March, B.
The Quality of Newly Laid Eggs on Farms in British Columbia ....Aug. 26—p 34
Blair, Jess F.
Broiler Producers in Arkansas Build Larger and Better Houses ....Aug. 5—p 74
Layers on Contract Hold Up Feed Volume of Miss. Mill ....Aug. 26—p 58
Miss. Firm Keeps 4½-5 Million Broilers on Feed Continuously ....Aug. 19—p 42
Miss. Poultryman Owns Nearly Half a Million Layers ....Aug. 26—p 54
Southern Feed Mills Seek New Opportunities ....Aug. 19—p 82
Brown, Dr. W. G.; Church, Dr. O. C.; Ralston, A. T.
Barley-Alfalfa Rations for Fattening Steers ....Aug. 19—p 48
Church, Dr. O. C. (See Brown, Dr. W. G.)
Eisenberg, Dr. Sylvan
Five-Minute Assays ....Aug. 19—p 35
Francis, D. W. (See Berry, L. N.)
Lance, Phil
Modernization Called Growth Insurance for Mill in Urban Area ....Aug. 5—p 62
Lofgreen, Dr. G. P.
All-Concentrate Ration for Beef Cattle ....Aug. 12—p 50
March, B. (See Biely, J.)
Moreng, Dr. Robert E.
Cyclo House ....Aug. 5—p 26
Nelson, Al P.
Expanded Services Help Build Firm's Volume ....Aug. 19—p 50
Ohio Egg Firm Reflects Poultry Marketing Trend ....Aug. 5—p 18
Wisconsin Firm's Heifer Program ....Aug. 26—p 26
Nusbaum, W. D.
Financing in the Feed Industry ....Aug. 12—p 20
Perry, Dr. T. W.
American Society of Animal Production ....Aug. 19—p 26
Pickett, R. A.
Purdue Reports on Research With Swine ....Aug. 26—p 10
Porter, Dr. Gilbert H.
Using Dairy Feed Information on the Farm ....Aug. 5—p 38
Ralston, A. T. (See Brown, Dr. W. G.)
Roberson, R. H. (See Berry, L. N.)
Sibbald, Dr. I. R.; Slinger, Dr. S. J.
Measuring Available Energy in Poultry Feeds ....Aug. 19—p 18
Slinger, Dr. S. J. (See Sibbald, Dr. I. R.)
Stratton, Charles
Maine Feed Mill Is Backbone of Large Integrated Broiler Operation ....Aug. 12—p 44
Teague, Dr. H. S.
Ohio Experiment Station's Annual Swine Day ....Aug. 26—p 42

BARLEY:
Barley-Alfalfa Ratios for Fattening Steers ....Aug. 19—p 48
More Year Round Feeding in Northwest Seen ....Aug. 5—p 22

CANADA:
Broiler Output ....Aug. 5—p 82
Cattle, Calves on Farms Increase 5% ....Aug. 12—p 7
Drouth Aid Set for Canadian Cattlemen ....Aug. 5—p 8
Group Opposes Grain Price Controls ....Aug. 12—p 66
Shipments of Feeds Increase ....Aug. 12—p 47

CATTLE FEEDING:
All-Concentrate Ration for Beef Cattle ....Aug. 12—p 50
American Society of Animal Production ....Aug. 12—p 36
Barley-Alfalfa Ratios for Fattening Steers ....Aug. 19—p 48
More Year Round Feeding in Northwest Seen ....Aug. 5—p 22

CHEMOBIOTICS:
American Society of Animal Production ....Aug. 19—p 26

COCCIDIOSTATS:
Zoalene-Oleandomycin Cleared for Chickens ....Aug. 5—p 8

COMPANIES:
Abbott Laboratories, Inc. (Appointment) ....Aug. 5—p 18
Aledo Feedlot and Feed Mill (Feed Mill) ....Aug. 19—p 52
Allied Mills, Inc. (Opposing Rail Proposal) ....Aug. 12—p 1
(Transfer) ....Aug. 19—p 12
Altman's Mills (Unextracted Soybean Developments) ....Aug. 26—p 24
Amburgo Co. (Appointment) ....Aug. 19—p 10
American Cyanamid Co. (Appointment) ....Aug. 5—p 10
Anderson Grain Co. (Buys Gallatin Valley Mlg. Co.) ....Aug. 19—p 29
Arbie Mineral Feed Co. (Banquet) ....Aug. 19—p 72
Arbor Acres (Sales Manager) ....Aug. 5—p 11
Archer-Daniels-Midland Co. (Plans Bean Plant) ....Aug. 19—p 64
Arkansas Valley Industries, Inc. (Awaits Federal Nod) ....Aug. 5—p 6
(FDIC Approves New Bank) ....Aug. 19—p 110
(Promotion) ....Aug. 19—p 12
(Sales of Debentures) ....Aug. 19—p 40
Babcock Farm, Inc. (Promotion) ....Aug. 26—p 12
Beacon Milling Co. (Appointment) ....Aug. 19—p 12
Bemis Bro. Bag Co. (Election) ....Aug. 5—p 11
(Vice President) ....Aug. 26—p 13
Best Feed & Seed Co. (Uses Anniversary Sales to Build Volume) ....Aug. 12—p 76
Big Dutchman Automatic Poultry Feeder Co. (Appt.) ....Aug. 12—p 14
Blatchford Calf Meal Co. (Promotion Steps) ....Aug. 12—p 4
Borden Co. (Award Winner) ....Aug. 19—p 7
(Financial Report) ....Aug. 12—p 18
Borden Special Products Co. (Appointment) ....Aug. 12—p 16
Bowman, Charles, & Co. (Appointment) ....Aug. 26—p 13
Bradley & Baker (Appointment) ....Aug. 12—p 14
Brampton, J. W., Co., Inc. (Buys Methionine Business) ....Aug. 5—p 8
Brown, Jeff D., & Sons Co. (Broiler of Future) ....Aug. 19—p 56
Butler Manufacturing Co. (Promotion) ....Aug. 19—p 13
Canada Packers, Ltd. (New Mill) ....Aug. 19—p 105
Cargill, Inc. (Appointment) ....Aug. 5—p 10
(Grain Elevator Strike) ....Aug. 19—p 4
(Namad to Cargill Board) ....Aug. 5—p 7
Central Soya (Appointments) ....Aug. 5—p 10; Aug. 19—p 10; Aug. 26—p 13
(New Vice President) ....Aug. 5—p 7
(Promotions) ....Aug. 12—p 14; Aug. 19—p 10; Aug. 26—p 12
Cereal By-Products Co. (Promotion) ....Aug. 19—p 10
Chick Master International Co. (Firm Opens) ....Aug. 19—p 105
Cobb's Pedigreed Chicks, Inc. (Promotion) ....Aug. 26—p 13
Cologne Milling, Inc. (Buys GTA Feed Facilities) ....Aug. 19—p 95
Colorado Milling & Elev. Co. (Appointment) ....Aug. 26—p 12
Commercial Solvents Corp. (Appts.) ....Aug. 5—p 10; Aug. 19—p 10
(Net Up 8%) ....Aug. 12—p 63
Consumers Cooperative Assn. (Egg Program) ....Aug. 26—p 6
Cooperative Supply Co. (Expanded Services) ....Aug. 19—p 50
Corn King Co. (Appointment) ....Aug. 26—p 12
Corn Products Co. (Earnings) ....Aug. 5—p 54
Cosby-Hodges Milling Co. (Sells to Federal Compress & Warehouse Co.) ....Aug. 26—p 1
Cotton Producers Assn. (New Mill) ....Aug. 5—p 1
Crystal Springs Feed Mill (Layers on Contract) ....Aug. 26—p 58
Daffin Manufacturing Co. (Pelleting Demonstrations) ....Aug. 26—p 72
(Promotion) ....Aug. 5—p 85
Daffin Corp. (Appointment) ....Aug. 12—p 14
(Merge With Green Isle Portable Mill) ....Aug. 26—p 11
Dairyland Food Labs., Inc. (New Calf Scours Product) ....Aug. 19—p 53
Dal-Gar Corp. (Grain Facility) ....Aug. 5—p 83
Delaware Poultry Laboratories (Expansion) ....Aug. 12—p 66
(Plant for Vaccine Output) ....Aug. 5—p 68
Dodgen Industries (New Factory & Office) ....Aug. 5—p 24
Dorn & Mitchell Laboratories (Promotion) ....Aug. 5—p 11
Doughboy Industries (Executive Changes) ....Aug. 26—p 12
(Sales Report) ....Aug. 19—p 1
Dow Chemical Co. (Appointment) ....Aug. 12—p 16
(Fumigation Seminar) ....Aug. 12—p 74
(New Grub Control Insecticide) ....Aug. 12—p 74
(Zoalene-Oleandomycin Cleared) ....Aug. 5—p 8
Eshelman, John W., & Sons (Appointments) ....Aug. 12—p 16; Aug. 26—p 13
Ewing, Ray, Co. (Appointment) ....Aug. 19—p 4
Ewing Industries, Inc. (Expanded Feed) ....Aug. 26—p 84
Eastern States Farmers Exchange, Inc. (Promotion) ....Aug. 19—p 12
Farmers Union Grain Terminal Assn. (New Head) ....Aug. 5—p 6
(Sales Report) ....Aug. 26—p 91
Federal Compress & Warehouse Co. (Buys Cosby-Hodges) ....Aug. 26—p 1
Garth Enterprises (Poultryman Owns Nearly Half a Million Layers) ....Aug. 26—p 54
General Mills, Inc. (Confidence in Feed Division) ....Aug. 26—p 7
(Part of Wisconsin Swine Project) ....Aug. 26—p 1
(Swine Producers Meeting) ....Aug. 26—p 32
(To Close Spokane Mill) ....Aug. 26—p 4
Globe Laboratories, Inc. (Pfizer to Acquire Globe) ....Aug. 26—p 4
Gooch Feed Mill Co. (Red Circle Auction) ....Aug. 12—p 18
Hales & Hunter Co. (Appointment) ....Aug. 26—p 12
Hand, Peter, Foundation (Branch Office) ....Aug. 5—p 78
Haynes Milling Co., Inc. (Appointment) ....Aug. 12—p 14
Hess & Clark (Appointment) ....Aug. 12—p 14
(Film on Nitrofuran) ....Aug. 26—p 8
Heisdorf & Nelson Farms, Inc. (Staff Changes) ....Aug. 19—p 10
Hingham Feed Mills (Heifer Program) ....Aug. 26—p 26
Honeggers' & Co., Inc. (Profits Increase) ....Aug. 19—p 1
(Promotion) ....Aug. 19—p 10
Idah-Best, Inc. (Appointment) ....Aug. 19—p 10
International Minerals & Chemical Corp. (Reports Best Year) ....Aug. 19—p 40
International Milling Co. (Promotion) ....Aug. 26—p 6
Jackson Grain Co. (Nutrena Buys Mill) ....Aug. 5—p 1
Jefferson Egg Corp. (New Group) ....Aug. 19—p 78
Spencer Kellogg & Sons, Inc. (Merger Approved) ....Aug. 5—p 4
Linwood Stone Products Co., Inc. (Appointment) ....Aug. 12—p 16
Lucas Prdoucts Co. (Appointment) ....Aug. 19—p 13
Merchants Co. (Promotion) ....Aug. 26—p 4
Merck & Co., Inc. (Sales Increase) ....Aug. 12—p 47
Michigan Farm Bureau Services, Inc. (Appointment) ....Aug. 19—p 13
Mid-America Corp. (Buys Superior Feed Mills) ....Aug. 12—p 1
Miller Publishing Co. (Appointment) ....Aug. 12—p 96
Montana Flour Mills Co. (Sales Meeting) ....Aug. 12—p 63
(Year-Round Feeding) ....Aug. 5—p 22
Moorman Manufacturing Co. (New Feed Plant) ....Aug. 19—p 7
Moyer & Son Feed Mill (Modernization) ....Aug. 5—p 62
Myers Feed Co., Ltd. (Canadian Feed Plant) ....Aug. 26—p 61
New England Grain Co. (Integrated Broiler Operation) ....Aug. 12—p 44
Nopco Chemical Co. (Growth Stimulant for Cattle) ....Aug. 5—p 4
(Niacin Prices) ....Aug. 12—p 7
Nutrena Mills, Inc. (Appointment) ....Aug. 12—p 16
(New Mill) ....Aug. 26—p 1
(Personnel Changes) ....Aug. 26—p 12
Owens-Illinois Paper Products (Appointment) ....Aug. 26—p 13
Park, Philip R., Inc. (Man-Atronics System) ....Aug. 26—p 16
(Sales Conference) ....Aug. 26—p 82
Pfizer, Chas., & Co., Inc. (Arkansas Lab.) ....Aug. 19—p 99
(Fall Display) ....Aug. 12—p 79
(New Research Labs.) ....Aug. 12—p 84
(Service Award) ....Aug. 12—p 18
(Teaching Award) ....Aug. 19—p 7
Pillsbury Co., The (Dealer Refresher School) ....Aug. 12—p 25
(Feed Division Improvement) ....Aug. 19—p 1
(Offers to Cooperate With House Committee) ....Aug. 19—p 8
Power Protein, Inc. (Unextracted Soybean Developments) ....Aug. 26—p 24
Product Handling, Inc. (Appointment) ....Aug. 12—p 16
Ralston Purina Co. (Appointment) ....Aug. 19—p 10
(New Executives) ....Aug. 12—p 6
(Sales Report) ....Aug. 12—p 1
(Votes Dividend) ....Aug. 15—p 8
Ray, Joe, Inc., The (More Housing) ....Aug. 12—p 35
Richardson-Merrell, Inc. (Research Facilities) ....Aug. 19—p 80
Richardson Scale (Personnel) ....Aug. 12—p 14
Salsbury's, Dr., Lab. (Appointment) ....Aug. 5—p 10
(Ghana Official Visits Plant) ....Aug. 26—p 61

Seco, Inc. (Appointments) ....Aug. 19—p 13
Scientific Nutritional Service (California Distributor)..Aug. 19—p 105
Specifide, Inc. (Appointment) ....Aug. 19—p 12
(Election) ....Aug. 26—p 13
Southern States Cooperative (Milk Replacer) ....Aug. 5—p 60
(Reports Feed Down) ....Aug. 19—p 1
Sprout, Waldron & Co. (Gasoline Tax Refund) ....Aug. 26—p 81
Superior Feed Mills, Inc. (Sells to Mid-America, Inc.)..Aug. 12—p 1
(To Be Division of Mid-America Corp.) ....Aug. 26—p 38
Sutorbilt Corp. (Representative) ....Aug. 19—p 83
Swine Breeding Research Cooperative (Swine Breeding Project) ....Aug. 26—p 1
Sterwin Chemicals Inc. (Appointment) ....Aug. 5—p 11
Textron, Inc. (Director Post) ....Aug. 5—p 4
(Promotion) ....Aug. 19—p 6
United Cooperatives (Feed Testing Program) ....Aug. 12—p 96
United Grain Growers, Ltd. (President) ....Aug. 19—p 13
Vit-A-Way, Inc. (Sales Event) ....Aug. 19—p 29
Wagner's, Inc. (Pelleting Plant) ....Aug. 5—p 83
Walnut Grove Products Co. (Purchases Iowa Bank) ...Aug. 19—p 7
Wayne Distributing Co. (Appointment) ....Aug. 26—p 12
Weaver Bros., Inc. (Poultry Marketing) ....Aug. 5—p 18
Whitmoyer Laboratories, Inc. (Appointment) ....Aug. 5—p 10
Wirthmore Mills (Manager) ....Aug. 12—p 7
Young's Vitamin & Mineral Products Co. (Appt.) ....Aug. 5—p 11
Zonolite Co. (Bulking Agent) ....Aug. 26—p 91

CONFERENCES:
American Society of Animal Production..Aug. 12—p 36; Aug. 19—p 26
Purdue Swine Day ....Aug. 26—p 10
Ohio Swine Day ....Aug. 26—p 42
Poultrymen's Get-Together (Cornell) ....Aug. 5—p 7
Swine Producers' Meeting (Sponsored by General Mills) ....Aug. 26—p 32
Wisconsin Nutrition School ....Aug. 19—p 1

CONSUMPTION & PRODUCTION:
Feeding of Oilseed Meals Increases 7% ....Aug. 12—p 96
June Consumption of Feedstuffs ....Aug. 26—p 39
U.S. 6-Month Feed Tonnage Up 9% ....Aug. 26—p 1

COPRA MEAL:
California Copra Meal Experiment ....Aug. 19—p 87

CREDIT & FINANCING:
Broiler Credit from Banks, Feed Firms Up ....Aug. 19—p 4
FHA Livestock Loans Available to Jan. 1 ....Aug. 12—p 7
Financing in the Feed Industry ....Aug. 12—p 20

DAIRY FEEDING:
Using Dairy Feed Information on the Farm ....Aug. 5—p 38

DAIRY INDUSTRY:
Changes Cause Concern in Dairy Industry ....Aug. 5—p 6

DISEASES:
Kentucky Reports on Cattle Bloat Research ....Aug. 19—p 38
Program to Help Eliminate Salmonella Contamination Started ....Aug. 12—p 68
Sees Disease-Free Poultry Area in Maine ....Aug. 5—p 28

EDUCATION:
Arkansas Poultry Post to Dewey McNiece ....Aug. 12—p 7
Dr. Ralph Baker to Join Ohio State Staff ....Aug. 5—p 90

EGGS:
The Quality of Newly Laid Eggs on Farms in British Columbia ....Aug. 26—p 34

ENERGY:
American Society of Animal Production ....Aug. 19—p 26
Energy in Turkey Rations Studied ....Aug. 5—p 32
Measuring Available Energy in Poultry Feeds ....Aug. 19—p 18

ENZYMES:
American Society of Animal Production ....Aug. 19—p 26
New Growth Stimulant for Cattle ....Aug. 5—p 4
Ohio Swine Day ....Aug. 26—p 42
Protein and Enzyme Test With Cattle ....Aug. 26—p 90

EXPORTS:
1959-60 Set New Record for U.S. Exports of Feeds....Aug. 5—p 57

FARM PROGRAM:
Are Turkeys Guinea Pigs for Control Experiments?....Aug. 12—p 1
Congress Passes Half-of-Loaf Farm Bill ....Aug. 5—p 1
Industry, USDA Discuss New Turkey Legislation....Aug. 26—p 1
Questions and Answers on Turkey Legislation ....Aug. 26—p 86
Waits for Specific Data on Marketing Orders ....Aug. 12—p 1

FATS:
Abstracts From Abroad ....Aug. 12—p 78
Study on Animal Fat for Cows ....Aug. 19—p 96

FEED INDUSTRY:
National Soybean Processors Assn. ....Aug. 12—p 10

FEED SUPPLIES:
Factors Point to First Feed Grain Cut in Decade.....Aug. 5—p 1
Total Feed Grain Tonnage Off 15% ....Aug. 19—p 4
Up or Down ....Aug. 5—p 84

FREIGHT RATES:
Ask Reduced Freight Rates for Drouth Areas ....Aug. 5—p 4
Georgia Farm Group Favors Rail Rate Cut ....Aug. 5—p 89
Georgia Poultry Federation ....Aug. 26—p 6
Georgia and Virginia Groups Support Cuts ....Aug. 12—p 8
ICC Suspends Rates Proposed by Railroad ....Aug. 12—p 1
Rails Agree on Break for South ....Aug. 5—p 1
TVA Joins Opposition Against Rate Change ....Aug. 5—p 89

GOVERNMENT AID:
Drouth Area Prices of Grains to Be 75% of Support..Aug. 19—p 7
Feed Groups Prepare Industry Proposal ....Aug. 19—p 53

GRAIN SORGHUMS:
Up or Down ....Aug. 12—p 38

HORMONES:
American Dehydrators Assn. ....Aug. 19—p 103
Ohio Swine Day ....Aug. 26—p 42

INSECTICIDES:
Dow Gets Approval for Grub Control Insecticide....Aug. 12—p 74

INTEGRATION & CONTRACT FARMING:
Arkansas Producers Advised to Enlarge Table Egg Flocks ....Aug. 5—p 64
Changes Being Planned or Made in Broiler Growing Arrangements ....Aug. 19—p 100
Delmarva Study Tells Why Feed Industry Is Strongest Factor in Broiler Growing ....Aug. 12—p 26
Layers on Contract Hold Up Feed Volume ....Aug. 26—p 58
Maine Feed Mill Is Part of Broiler Operation ....Aug. 12—p 44
Miss. Poultryman Owns Nearly Half a Million Layers..Aug. 26—p 54
Pa. State Poultry Federation ....Aug. 5—p 34

LITERATURE:
Swine Science Third Edition ....Aug. 12—p 72

LIVESTOCK NUMBERS:
Arizona, California Cattle on Feed Drop ....Aug. 12—p 7
Dairy Cow Numbers Off 1% From 1960 Period ....Aug. 26—p 84
Feed Plan's Effect on Livestock Noted ....Aug. 5—p 48
1961 Lamb Crop Is 1% Larger Than 1960 ....Aug. 5—p 8
Record Meat Production Cited ....Aug. 26—p 77
Shipments of Feeder Cattle Off From 1960 ....Aug. 5—p 7

MANAGEMENT—BUSINESS:
Changes in Broiler Growing Arrangements ....Aug. 19—p 100
Feed Production and Distribution Given Special Attention by Broiler Companies ....Aug. 19—p 44
Southern Feed Mills Seek New Opportunities ....Aug. 19—p 82
Wisconsin Nutrition School ....Aug. 19—p 1

MANAGEMENT—LIVESTOCK & POULTRY:
Build Larger and Better Broiler Houses ....Aug. 5—p 74
Cattle Not Like Chickens—Extra Light Doesn't Pay ...Aug. 12—p 32
Chicks Raised Under Continuous Light Develop Eye Trouble ....Aug. 12—p 96
Egg Production Characteristics of Pullets Managed Under Three Systems ....Aug. 12—p 40
Iowa Swine Studies at Confinement Unit ....Aug. 19—p 69
Layers Should Not Be Crowded ....Aug. 19—p 58
NEPPCO Allots 5,000 Copies of Its Pen Record Book..Aug. 26—p 82
Ohio Swine Day ....Aug. 26—p 42
Poultrymen's Get-Together ....Aug. 5—p 7
Results With Turkey Breeder Hens in Cages ....Aug. 19—p 78
Study on Oiling of Market Eggs ....Aug. 26—p 56
West Virginia Poultry Assn. ....Aug. 19—p 14

MARKETING:
American Poultry Congress ....Aug. 5—p 14
Co-op Egg Market Plan ....Aug. 26—p 6
How Can Feed Supplier Help Poultry Customers....Aug. 26—p 18
Ohio Egg Firm Reflects Poultry Marketing Trend ....Aug. 5—p 18
Poultrymen's Get-Together ....Aug. 5—p 7
Virginia Turkey Assn. ....Aug. 5—p 80

MERCHANDISING:
Expanded Services Help Build Volume ....Aug. 19—p 50
Uses Anniversary Sales to Build Volume....Aug. 12—p 76

MINERALS:
Abstracts From Abroad ....Aug. 12—p 78
American Society of Animal Production ....Aug. 19—p 26
Beirut Research on Rock Phosphate Told ....Aug. 19—p 72
Need for Higher Calcium Levels ....Aug. 19—p 32
Putting Research to Work ....Aug. 5—p 50
Suggest 5% Calcium for Laying Feeds ....Aug. 19—p 38

MOLASSES:
"Powerful Molasses" ....Aug. 19—p 45

PATENTS:
Patents Issued by U.S. Patent Office ....Aug. 12—p 54

PELLETING:
Pelleting Demonstration ....Aug. 26—p 72
Ohio Swine Day ....Aug. 26—p 42
Pelleted Rations for Steers ....Aug. 26—p 39
Pelleting Need by Northwest Area Told ....Aug. 26—p 68

POULTRY INDUSTRY:
Arkansas Producers Advised to Enlarge Table Egg Flocks ....Aug. 5—p 64
Broiler Hearing Testimony Reviewed ....Aug. 26—p 8
Broiler Industry Opens Inside Control Efforts....Aug. 12—p 1
Broiler Men Ask Breeder Hen Cutback ....Aug. 19—p 1
Capital Comment ....Aug. 19—p 8; Aug. 26—p 8
Committee Set to Open Poultry Hearings ....Aug. 12—p 1
Delmarva Poultry Industry, Inc. ....Aug. 26—p 6
Delmarva Price Lift Too Late for Some Contractors...Aug. 5—p 8
Feed Manufacturers Rapped in House Broiler Hearings..Aug. 19—p 1
Hearings on Broilers Bring Comments From Delmarva Poultrymen ....Aug. 26—p 93
Independent Broiler Producers Present Price Ultimatum..Aug. 5—p 1
Remarks on Industry's "Nit-Wit" Philosophy ....Aug. 19—p 110
Squeeze on Broiler, Turkey Growers Severe ....Aug. 12—p 1
Teamsters Union Proposes to Help Broiler Industry....Aug. 26—p 1
USDA Sets Meeting on Buying Breeder Hens ....Aug. 26—p 1

POULTRY NUMBERS:
Broiler Men Ask Breeder Hen Cutback ....Aug. 19—p 1
Egg-Type Chick Production Shows Gains Over 1960....Aug. 26—p 7
Number of Young Chickens for Year Expected to Increase 4% ....Aug. 5—p 6
Poult Output Continues Gains ....Aug. 26—p 4
Predicts 20% More Turkeys for Holidays ....Aug. 5—p 7

PRESERVATIVES:
Annual Purdue Swine Day Conference ....Aug. 26—p 10

PRICES:
Cattle Price Outlook More Optimistic ....Aug. 5—p 6
Dumping of Older Broilers Drops Price to 11c ....Aug. 19—p 1
Firmness Noted in Turkey Marketing ....Aug. 5—p 1
Independent Broiler Producers Present Price Ultimatum..Aug. 5—p 1
Modest Hog Price Decline Expected ....Aug. 5—p 49
Predicts 20% More Turkeys for Holidays ....Aug. 5—p 7
Squeeze on Broiler, Turkey Growers ....Aug. 12—p 1
Stronger Than Usual Hog Prices Expected ....Aug. 19—p 110
Up or Down ....Aug. 12—p 38
USDA Acts to Strengthen Oil Market ....Aug. 26—p 1
USDA Adds Report on Corn Futures ....Aug. 26—p 38
USDA Reports Clues to Direction Poultry, Egg Prices May Go ....Aug. 5—p 7
USDA Sees Bull in Soybeans ....Aug. 5—p 1
Weekly Poultry Report Starts in Arkansas ....Aug. 19—p 111

PRICE SUPPORTS:
Bean Price Supports Through Marketing Assn. ....Aug. 12—p 7
More USDA Buying of Chicken ....Aug. 5—p 8
USDA to Buy Turkeys for School Program ....Aug. 5—p 1

PRODUCTION & MILL OPERATIONS:
Expanded Services Help Build Firm's Volume ....Aug. 19—p 50
Feed Mill Is More Than Sideline for Custom Feeder...Aug. 19—p 52
Feed Production and Distribution Given Special Attention by Broiler Companies ....Aug. 19—p 44
Five-Minute Assays ....Aug. 19—p 35
Miss. Firm Keeps 4½-5 Million Broilers ....Aug. 19—p 42
Modernization Called Growth Insurance ....Aug. 5—p 62
Record-Keeping System Devised for Drugs ....Aug. 19—p 62

PROTEIN:
American Society of Animal Production ....Aug. 19—p 26
Protein and Enzyme Test With Cattle ....Aug. 26—p 90
Research on Protein Supplements ....Aug. 26—p 39
Study Shows Animal Hides as Source of Protein for Poultry ....Aug. 19—p 24

QUALITY CONTROL:
Five-Minute Assays ....Aug. 19—p 35

RABBIT FEEDING:
Meat Rabbit, Worm Operations Combined ....Aug. 19—p 96

REGULATORY:
Check-Sample Program Includes Five Feeds ....Aug. 19—p 14
Custom Feed Label Suggestions Given ....Aug. 26—p 72
FDA Scientists Seize Drum of Fatty Acid Toxic to Chickens ....Aug. 5—p 91
Feed Control Comment ....Aug. 5—p 54; Aug. 19—p 88
Florida Drops Feed Standards for Trial ....Aug. 5—p 91
New Grub Control Insecticide ....Aug. 12—p 74
Points Likely to Be Checked by FDA Inspectors ....Aug. 26—p 91
Program to Help Eliminate Salmonella Contamination..Aug. 12—p 68
Record-Keeping System for Drugs ....Aug. 19—p 62
To Test USDA Poultry Regulations ....Aug. 12—p 6
Zoalene-Oleandomycin Cleared ....Aug. 5—p 8
USDA Takes Up Stock Feeding by Packers ....Aug. 5—p 4

RESEARCH:
Researchers Get Poultry Awards ....Aug. 26—p 81

RESTRICTED FEEDING:
Poultrymen's Get-Together ....Aug. 5—p 7
Suggestions on Feeding Replacement Pullets ....Aug. 5—p 20

SERVICE:
Expanded Services ....Aug. 19—p 50
How Can Feed Suppliers Help Their Poultry Customers?..Aug. 26—p 18
Using Dairy Feed Information on the Farm ....Aug. 5—p 38
Wisconsin Firm's Heifer Program ....Aug. 26—p 26

SOYBEAN MEAL:
National Soybean Processors Assn. ....Aug. 12—p 10
Ohio Swine Day ....Aug. 26—p 42

SOYBEANS:
Amino Acid Imbalance May Be Inhibiting Factor in Raw Beans ....Aug. 19—p 1
Capital Comment ....Aug. 12—p 6
Purdue Swine Day ....Aug. 26—p 10
Unextracted Soybean Developments ....Aug. 26—p 24
USDA Acts to Strengthen Oil Market ....Aug. 26—p 1
USDA Sees Bull in Soybeans ....Aug. 5—p 1

SWINE FEEDING:
Proper Feeding of Gilts Cited ....Aug. 5—p 48

TAXES:
Alabama Threatens Retaliatory Levy on Florida Citrus..Aug. 12—p 6

384
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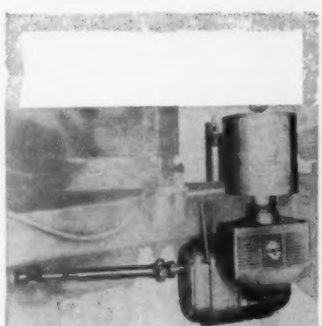

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Compromise in Chicken-Citrus Dispute Sought .....Aug. 26—p 7
Gasoline Tax Refund .....Aug. 26—p 81

TRANQUILIZERS:
American Society of Animal Production .....Aug. 19—p 26

TURKEY FEEDING:
Energy in Turkey Rations .....Aug. 5—p 32
Study of Turkey Feeding Systems .....Aug. 5—p 60

UREA:
American Society of Animal Production .....Aug. 19—p 26

VITAMINS:
Adding Vitamin C Evens Out Chicken Body Temperature.Aug. 12—p 79
American Society of Animal Production .....Aug. 12—p 36
Implicates Nitrate Level in Vitamin A Problem .....Aug. 19—p 4
Ohio Swine Day .....Aug. 26—p 42
Purdue Swine Day .....Aug. 26—p 10
Putting Research to Work .....Aug. 19—p 84

What you should know about DOG FOOD

Whether you're in the dog food manufacturing business or have considered putting your label on a dog food, the new Dog Food Ingredient Spec Sheets published by Ralph WELLS & Co. are "must" reading. Each 8½ x 11" sheet covers in detail one of the seven major dog food ingredients manufactured by WELLS; provides full size, full color product photos . . . ingredients features . . . guaranteed and average analyses . . . ingredient breakdown . . . and shipping container data. These spec sheets set standards by which to judge the quality of all your dog food ingredient purchases. They're *FREE* . . . just write to

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Study Delmarva Broiler Feed, Chick Costs

WASHINGTON — Data compiled by the U.S. Department of Agriculture in a current study of broiler production in Delmarva, which illustrate how certain aspects of the broiler industry have changed during the past decade, were introduced recently before a House of Representatives small business subcommittee as part of the pending poultry industry inquiry.

Production efficiency—including feed utilization, mortality and the length of the growing period—has improved substantially over the years. However, this progress has been offset to some extent by a gradual decline in prices received for broilers.

Estimates of feed and chick costs shown in the accompanying table are from preliminary figures prepared by USDA for its new "farm costs and returns" series on commercial family-operated broiler farms in Delmarva. Linley E. Juers, USDA agricultural economics advisor, said these figures "are intended to apply to the typical or representative situation."

Figures from the Delmarva table show that the growing period was cut from 12.7 weeks to 9.5 weeks in 10 years. Feed conversion—pounds of feed required to produce a pound of broiler—dropped from 3.7 to 2.3 lb. in 10 years. While feed cost per pound of feed remained relatively stable, feed cost per pound of broiler meat declined from 17.8¢ in 1950 to 10.6¢ in 1960. Chick costs—both per chick and per pound (cost per chick, in cents, divided by broilers sold per 100 chicks bought times liveweight per bird sold) were significantly lower in 1960 than in 1950.

Combination of feed cost per pound of meat and chick cost per pound for each of the years from 1950 to 1960 shows a gradual decline in "total" cost—from 22.9¢ to 14¢ lb.

Mr. Juers noted that feed and chick costs are estimated to be about 9% of the direct or cash cost of broiler production and 80% of total cost, including labor, depreciation and return on investment.

Speaking of the broiler industry in general, rather than in respect to Delmarva only, Mr. Juers remarked, "While some part of the declines in broiler prices has been offset by increases in production efficiency, prices have reportedly been below the direct cash costs of production in many years. This suggests that the capacity of the industry to produce, with its improved efficiency outstrips the capacity of the market to absorb supplies except at prices that impair the incomes of broiler producers. . . . Price declines during certain years have been so large that the value of broiler production has sometimes declined from the preceding year, despite significant increases in output."

According to Mr. Juers, "the extension of credit and provision of capital which relieves the grower of the risk of capital impairment continues to be the major inducement for growers to produce broilers.

"There has been some indication of an increasing amount of intermediate term credit being extended for constructing facilities for broiler production by integrators," he said. "The principal credit classification is the 30-, 60- or 90-day credit extended for feed and other production factors."

N.C. Firm Renews Oyster Shell Request

RALEIGH, N.C. — A request for permission to convert Albemarle Sound oyster shells into a product for poultry has been renewed by the North Carolina Shell Products Corp. of Elizabeth City. State permission to allow dredging up of centuries old deposits of shell is being sought.

The company has had the request in for three years, but it was renewed recently with the State Department of Conservation and Development when it was reported that the Bay Towing & Dredging Co., Mobile, Ala., has also been making overtures for permission for dredging rights.

State Sen. Elton Aydlett of Pasquotank said the sound could become a "gold mine" if the rights are granted. Hargrove Bowles, director of the conservation and development department, indicated that the committee will seek funds for a survey of the Sound to study the possible effects of dredging on fish and wildlife conservation.

Cost of Feed and Broiler Chicks per Pound of Live Weight Produced, Preliminary Estimates, Delmarva, 1950-60

Year	Age loaded out	Mortality	Feed* conversion	Feed cost per lb. of feed	Feed cost per lb. of meat	Liveweight per bird	Chick cost† each	Chick cost† per lb.	Total cost‡ per lb.: feed & chick	Broiler prices**
	wks.	%	lb.	cents	cents	lb.	cents	cents	cents	cents
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1950	12.7	8.5	3.7	4.8	17.8	3.2	15.0	5.1	22.9	26.1
1951	11.7	6.4	3.4	5.2	17.7	3.1	15.8	5.4	23.1	27.1
1952	11.0	10.0	3.4	5.5	18.7	3.1	15.4	5.5	24.2	28.6
1953	10.7	7.0	3.2	5.1	16.3	3.1	15.8	5.5	21.8	26.3
1954	10.4	8.0	3.1	5.2	16.1	3.1	14.9	5.2	21.3	22.5
1955	10.1	6.2	2.8	4.8	13.4	3.1	14.7	5.1	18.5	25.8
1956	10.0	5.0	2.6	4.9	12.7	3.3	14.2	4.5	17.2	20.0
1957	9.9	4.0	2.4	4.6	11.0	3.4	12.1	3.7	14.7	19.3
1958	9.9	4.5	2.4	5.0	12.0	3.5	13.1	3.9	15.9	19.0
1959	9.5	3.5	2.3	4.8	11.0	3.6	9.9	2.8	13.8	17.0
1960	9.5	5.5	2.3	4.6	10.6	3.7	11.8	3.4	14.0	17.6

*Pounds feed to produce one pound of broiler.

†Cost per pound = Cost per chick, cents / (broilers sold per 100 chicks bought) X (liveweight per bird sold)

‡Column (5) plus Column (8).

**Annual average of weekly prices at Delmarva.

SALES EXECUTIVES GROUP MEETS—The executive committee of the Sales Executives Council of the American Feed Manufacturers Assn. held its third annual meeting in Chicago recently. The meeting preceded the council's marketing seminar (Feedstuffs, Sept. 23), which was attended by over 230 feed sales and marketing executives. Seated around the table from left to right are: Paul Cory, Moorman Mfg. Co. (newly-elected chairman); Ed Reynolds, Central Soya; Bob Waite, Dannen Mills; Robert Johnson, Albers Milling Co. (substituting for G. A. Ensminger); W. F. Schafenacker, Kent Feeds; Dale Smith, Western Farmers Assn.; Marshall Backus, Cooperative G.L.F. Exchange; Bob Miller, Beacon Milling Co.; Bill Diamond, AFMA; Ed Glennon, AFMA; Bob Emmons, Wirthmore Feeds; Darrell Runke, Supersweet Feeds; Al Fuller, Nutrena Mills; Laton (Red) Henderson, Doughboy Industries; Wes Ballmann, Burrus Feed Mills; Earl Mitchell (newly elected vice chairman), Alabama Flour Mills; Davis Smith, Flint River Mills; E. J. Slevin, General Mills; M. R. Eighmy, Gooch Milling & Elevator Co.; Henry Crutchfield, The Quaker Oats Co.; and E. D. Griffin (retired), Allied Mills, Inc.

KENT—Dr. C. J. Lewis, director of research and nutrition for Kent Feeds, Inc., tells dealers about Kent's new $(RF)_2$ Cattle Feeding Program.

Kent Announces $(RF)_2$ Beef Feeding Program

MUSCATINE, IOWA—Kent Feeds, Inc., here has introduced its new $(RF)_2$ cattle feeding program to over 750 dealers and their employees in a series of five dealer clinics.

Details of a Kent Paul Bunyan dealer contest were also given to the dealers at these meetings, according to the firm which is headquartered here.

Dr. C. J. Lewis, vice president and director of research and nutrition, explained to the dealers that the $(RF)_2$ cattle feeding program is the result of "35 years of cattle feed research by the company and is expected to enhance the company's position as producer of the number one cattle feed in the Midwest."

"$(RF)_2$," he said, "is more than one ingredient, or one feed, or one amount of feed; it is a combination of ingredients and feeds, a scientific formulation on specific feeds to meet specific needs at specific times.

"$(RF)_2$," he said, "means repletion factors and rumen factors. Shipped in feeder cattle are depleted in many nutritional factors due to the stresses of shipping, weaning, drouth conditions in the range country, etc. The Kent $(RF)_2$ program is designed to replenish these deficiencies fast and provide a nutritionally correct diet for the cattle's health and growth. We know that the rumen contains billions of micro-organisms and that these organisms must be plentiful and vigorous if the cattle are to gain fast and efficiently with the finest finish and bloom. The Kent $(RF)_2$ cattle feeds are designed scientifically to furnish the many factors which are essential to an active rumen organism population."

Dr. Lewis also introduced several new feeds at the clinics. Included were a new protein block, a new mineral block and a new high phosphorus mineral to be used for shipped-in feeder cattle that are depleted of phosphorus when they arrive in the Midwest.

W. F. Schafenacker, vice president and sales manager, told the dealers of the Paul Bunyan contest in which dealers can win all-expense-paid Canadian fishing trips. The contest will close March 31, 1962, and the winners will take their trips during the summer of 1962, he said.

Other speakers at the clinics included Don Funk, dairy specialist; John Turner, poultry specialist, and Wilbur Pobanz, cattle specialist.

Illinois Feed Men, Poultry, Hatchery Group Meeting Set

SPRINGFIELD, ILL. — "Surviving the '60's" will be the theme for the annual joint convention of the Illinois Feed Assn. and the Illinois Poultry & Hatchery Federation to be held in the Springfield Armory here Nov. 8 and 9.

Making the announcement regarding the convention were the general convention co-chairmen: Don Young, DeKalb Agricultural Assn., Illiopolis, and Henry Marlowe, Marlowe's Feed & Hatchery, Huntley.

Kenneth Monfort, Greeley, Colo., a commercial feedlot operator, will speak on "Tomorrow's Cattle Business Today" at the opening session of the convention.

Other topics and speakers scheduled on the program for the two-day event were announced by the program committee headed by Clair Hendrix, Hendrix Hatchery, Herscher, and John Bonnett, Bonnett Feed & Grain Co., Bushnell, as follows:

Paul M. Stokes, management consultant for Rogers, Slade & Hill, New York, will discuss at separate sessions the topics "Organization and the Problems of Business Growth" and "The Need for New Approaches in Management." He will be followed by Alvin E. Oliver, executive vice president, Grain & Feed Dealers National Assn., Washington, speaking on "Government and Your Business."

John Pride, Little Rock, is scheduled to speak at a Nov. 9 breakfast. His topic will be "Shuck One Ear at a Time."

Manager's Role

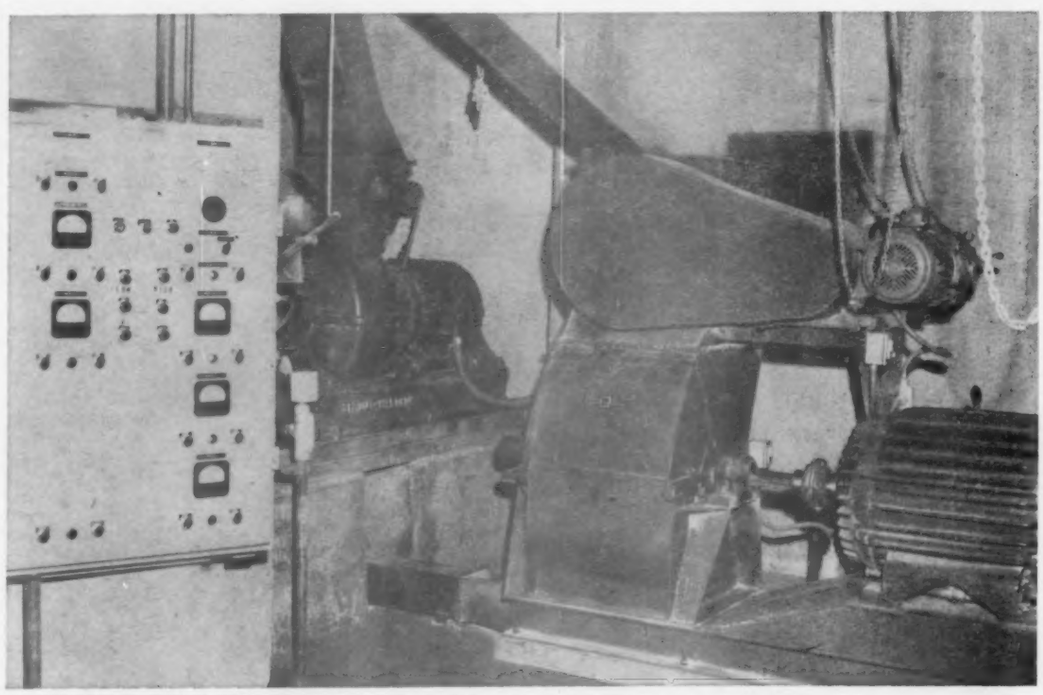
"The Manager's Job in Today's Economy" is the subject of a talk to be given by Dr. Richard Phillips, professor of agricultural economics, Iowa State University, Ames, Iowa, and the development of competent subordinates will be discussed by James M. Black, executive vice president, National Metal Trade Assn., Chicago.

The concluding address will be given by Ben Smith, general merchandise manager, Southwestern Bell Telephone Co., St. Louis, speaking on "Yes-Getters Build Customers and Markets."

A banquet and dance are slated for the night of Nov. 8.

The program committee has also announced that there will be a program of tours and luncheons for the wives.

One hundred exhibitors will be on hand to display and demonstrate their products and services to the 1,000 delegates expected to attend, according to announcement from the Illinois Feed Assn.



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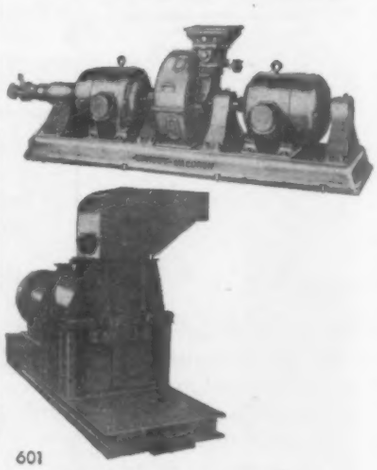

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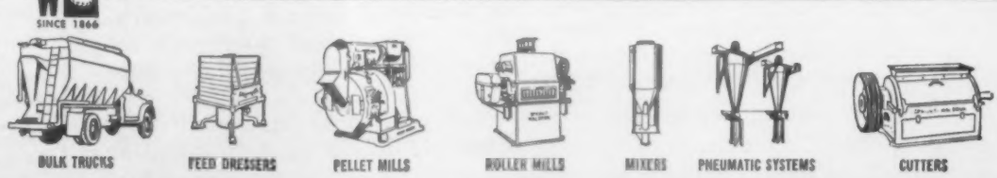

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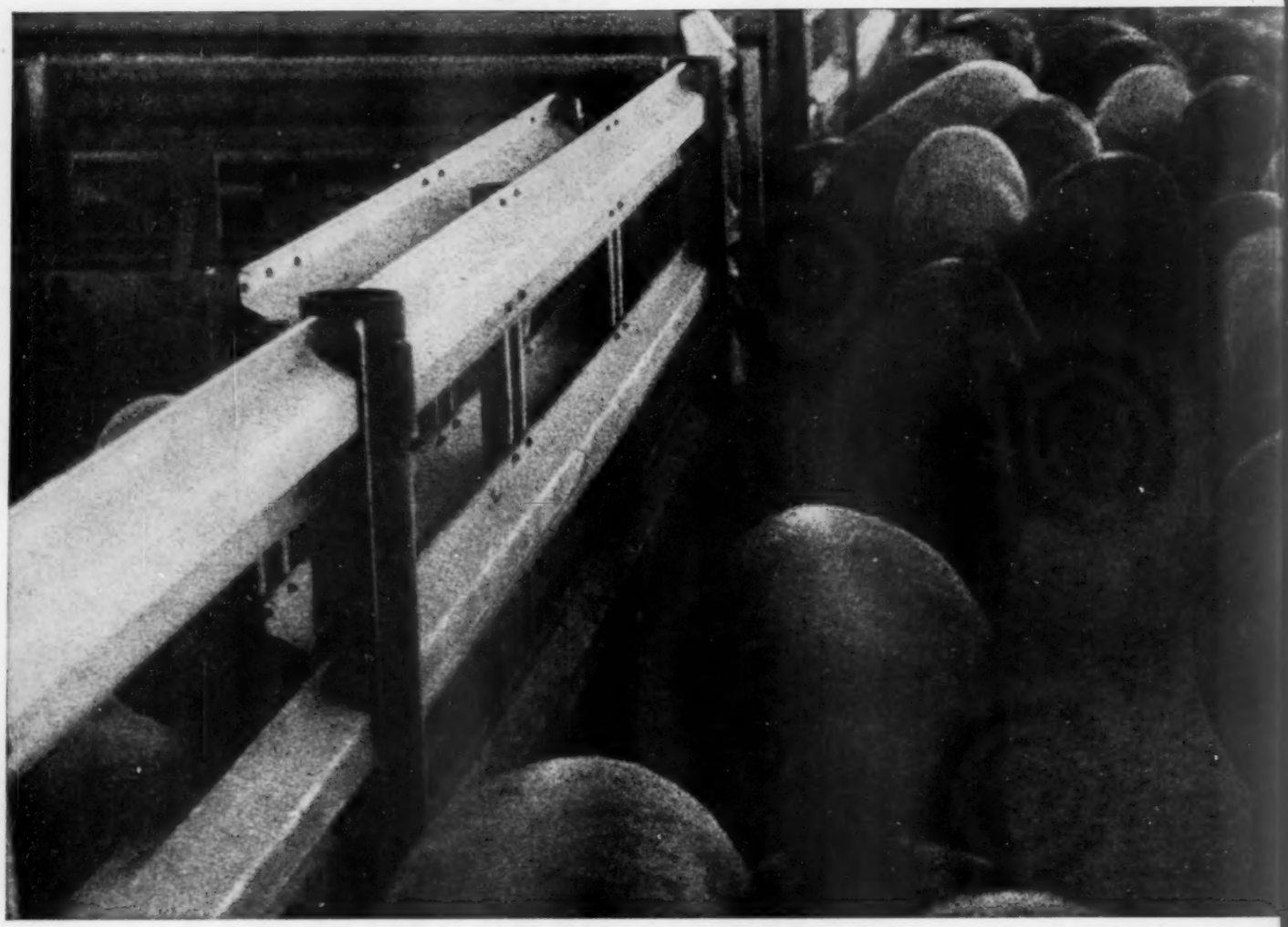
Contains ½ steamed bone meal . . . 6% *phosphorus. Guaranteed* that your livestock will eat it *free choice.*

Weather-Resistant Mineral Block
. . . not only salt and trace minerals, but also the needed *calcium* and *phosphorus* (6%). *Guaranteed* palatable.

Mixing Mineral Concentrate
Contains 9% *phosphorus,* plus all necessary trace minerals. A better buy for your custom mixing.

JUST THESE 3 FILL EVERY MINERAL NEED

No matter what antibiotic switch to new



Hogs fed rations with Taomyxin averaged:

- **8 days less feeding time to market**
- **at $34.20 less cost per 100 hogs over other antibiotics tested**

Just by changing the antibiotic in your swine feeds to Taomyxin, you can help your customers save money consistently . . . more reason than ever for them to switch to your program.

Taomyxin has proved it can produce more gains at less cost than any other antibiotic used alone, or any combination of antibiotics tested. Test averages show 8 days less feeding time and $34.20 less cost per 100 hogs.

Here's how much better Taomyxin proved out:

	More Gains from Taomyxin by:	Better Feed Efficiency from Taomyxin by:
Zinc Bacitracin	13.4%	7.3%
Bacitracin plus Penicillin	12.8%	5.7%
Penicillin plus Streptomycin	3.0%	3.4%
Penicillin plus Streptomycin plus Bacitracin	6.4%	1.6%
Chlortetracycline plus Penicillin plus Bacitracin	6.5%	1.2%

Testing by Pfizer, the feed industry, colleges, and on many hog farms has shown the recommended level of Taomyxin to be 2 grams of oleandomycin to 8 grams of oxytetracycline wherever increased performance is of prime importance.

During periods of high disease risk, the product of choice is still Terramycin** alone at high levels—it's the proven superior disease-fighting antibiotic.

Call your Pfizer representative for complete details on supplementing your rations with new Taomyxin.

Taomyxin requires a supplemental N. D. A. Have you filed yours? If not, do it now.

The following summary shows the average of test results comparing Taomyxin with antibiotics used alone or in combination:

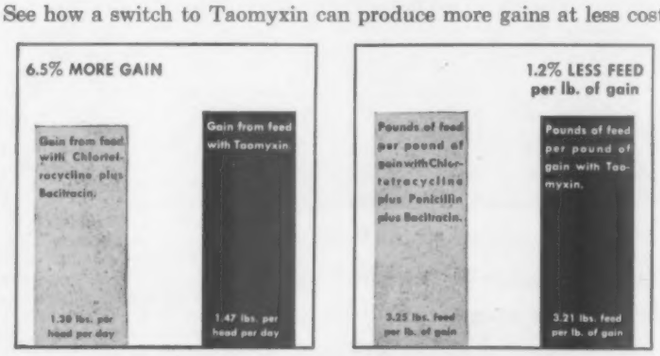
	Control†	Taomyxin
GROWTH		
Number of trials	12	12
Number of pigs	694	669
Av. daily gain—lbs.	1.38	1.48
Increase over controls—%	—	7.25%
FEED EFFICIENCY		
Number of trials	12	12
Number of pigs	694	669
Lb. feed/lb. gain	3.70	3.62
Improvement—%	—	2.20%
ECONOMICS††		
Cost per cwt. gain	$11.951	$11.761
Savings per cwt. gain	—	.190
Savings per pig (180 lbs. gain)	—	.342
Savings per 100 pigs	—	$34.20

†Other antibiotics and combinations of antibiotics.
††Cost of antibiotic supplements included.

you're using, it will pay to Taomyxin*™...

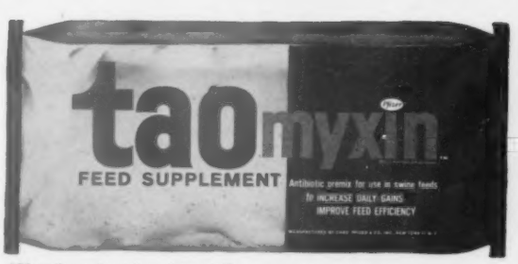
Using Chlortetracycline plus Penicillin plus Bacitracin?

See how a switch to Taomyxin can produce more gains at less cost


6.5% MORE GAIN
Gain from feed with Chlortetracycline plus Bacitracin.
1.38 lbs. per head per day
Gain from feed with Taomyxin
1.47 lbs. per head per day
1.2% LESS FEED per lb. of gain
Pounds of feed per pound of gain with Chlortetracycline plus Penicillin plus Bacitracin.
3.25 lbs. feed per lb. of gain
Pounds of feed per pound of gain with Taomyxin.
3.21 lbs. feed per lb. of gain

Taomyxin produced 9 lbs. more gain per day per 100 pigs . . . on 4 lbs. less feed per 100 lbs. gain.

For this trial, a regular, high-quality swine feed was used. Taomyxin was added to part of the feed, chlortetracycline, penicillin, and bacitracin to the rest . . . and the performance of the different rations was compared.



*Oleandomycin and oxytetracycline
**Brand of oxytetracycline—Reg. U.S. Pat. Off.

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Quarry Screen Shown Unsatisfactory As Flooring for Hogs

URBANA, ILL.—Quarry screen did not prove satisfactory as a flooring for hogs in a test conducted here by Dr. A. H. Jensen, University of Illinois swine researcher.

Dr. Jensen and his co-workers are continuing their studies of flooring for hogs with emphasis on slatted flooring, it was reported.

Dr. Jensen said regarding the quarry screen, "This screen, which had 1 in. square openings, did not provide enough surface for the animals to stand comfortably. As the pigs grew heavier, the screen hurt their feet. Consequently, they didn't move around much, wouldn't eat and made slower gains than usual."

Pigs on the screen were compared with similar pigs on concrete slats and wood (fir) slats. "Pigs on the concrete and wood slats gained equally well," Dr. Jensen said. "However, the concrete was much more durable than the fir." The pigs chewed the fir, he noted.

Dr. Jensen said he and his co-workers are continuing the tests with slatted floors since farmers are showing interest in them. Since the quarry screen didn't work, they are replacing it with a solid floor of green oak, which is more durable than fir, it was pointed out.

Green Oak Flooring

Pigs on the solid green oak flooring will be compared with pigs on the concrete and fir slabs. So far the university has made no tests comparing the effects of solid wood flooring or slats.

A main advantage of slatted floors over solid floors is ease of cleaning, said Dr. Jensen. The pigs work the droppings through the slats and thus keep themselves clean, he commented. Manure can be removed from under the flooring without interference from pigs or equipment, it was pointed out.

Dr. Jensen has observed that pigs that have too much room don't stay as clean as pigs in smaller quarters.

Pens in which the university is testing the various floors are about 6 by 12 ft. Each pen houses 10 or 12 pigs, averaging 7 sq. ft. per animal. The area is not changed during the growing period, which starts when pigs weigh about 50 lb.

The concrete slats are 5 inches wide at the top and taper to 3½ inches at the bottom. Dr. Jensen warns that rough edges can injure the pigs. The wood slats are 4 inches wide at the top and taper to about 3 inches on the bottom. Both concrete and wood slats are spaced 1 in. apart.

SHE'S A PURINA BUYER — Marie Jane Polud, native of Edmonton, Alberta, is the Montreal plant buyer for the Ralston Purina Co., Ltd. Her responsibilities include the purchasing of over $12 million worth of raw materials and packaging supplies annually for the firm.

Woman Is Buyer For Ralston Purina's Montreal Plant

MONTREAL—An attractive woman has made an important place for herself in what is often considered a man's field—the feed industry. She is Miss Marie Jane Polud, Montreal plant buyer for the Ralston Purina Co., Ltd.

Miss Polud, a native of Edmonton, Alberta, joined Purina's Montreal plant in 1949, after her graduation from Darcy McGee Classical College.

Starting as a clerk, Miss Polud, who has taken many business courses since joining the company, worked in various departments before obtaining her present position where she is responsible for the purchasing of over $12 million worth of raw materials and packaging supplies annually.

In addition to her purchasing responsibilities for the Montreal plant, Miss Polud also coordinates the purchase of certain ingredients for other Canadian plants.

Highly respected as a buyer and a keen businesswoman, Miss Polud has the distinction of being the only woman buyer out of 68 manufacturing plants operated by Purina in North and South America.

Microbial Metabolite Handbook Published

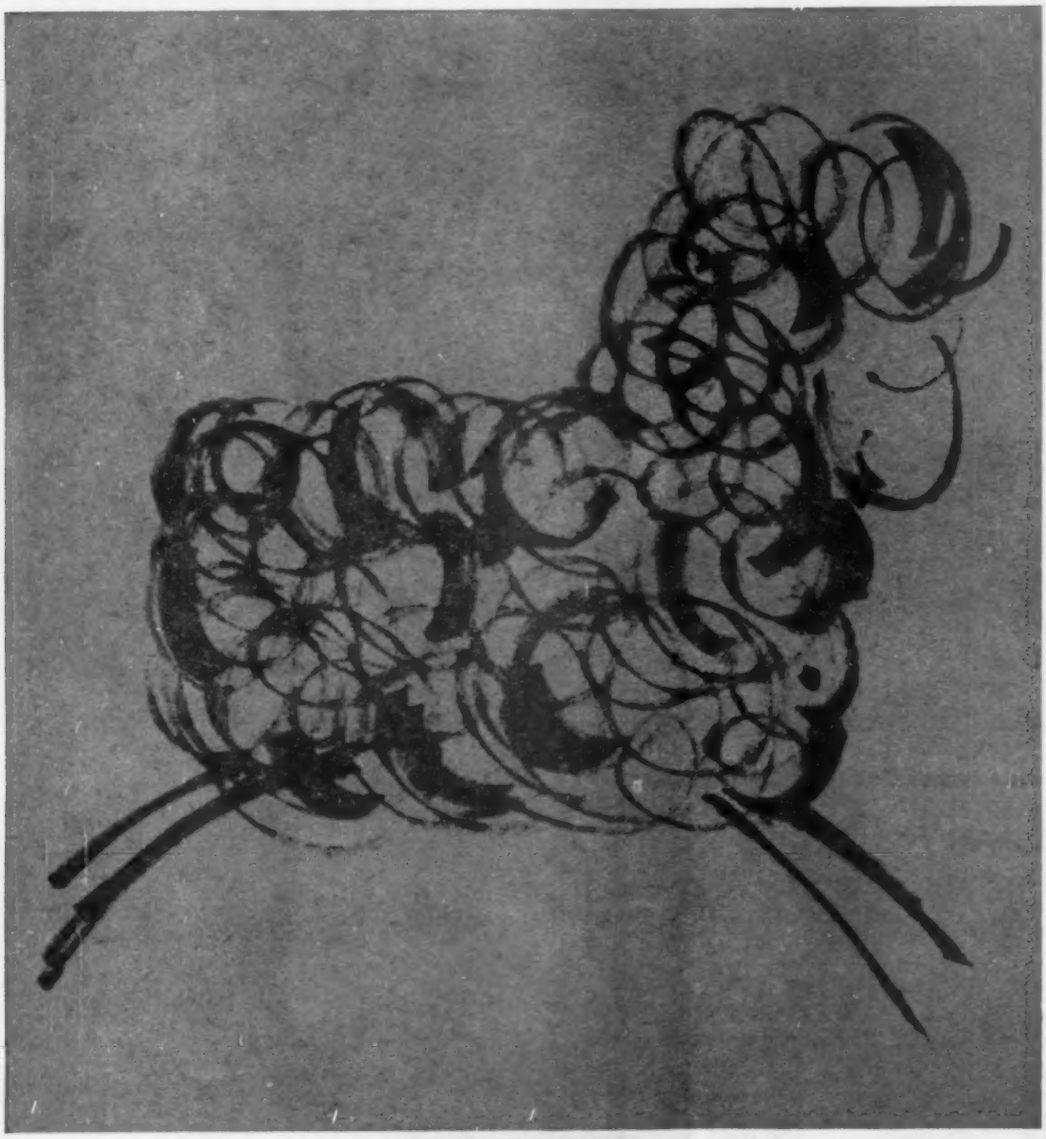
NEW YORK—Publication of a new manual of fermentation chemicals, The Pfizer Handbook of Microbial Metabolites, has been announced by McGraw-Hill Book Co. here.

The publishing firm says that this book is the first effort to provide data on the source and the physical and chemical properties of all known metabolic products isolated from bacteria, molds, fungi and lichens. The announcement states that the handbook describes biosynthetic pathways to fermentation chemicals and contains information on large molecules whose importance in immunology and genetics is now widely recognized.

McGraw-Hill says that the handbook lists over 1,300 metabolites with their physical and chemical properties, molecular structures and the organisms involved in their production.

It is reported that the book covers a "large number of Streptomyces metabolites, the genus of microorganisms which has been one of the richest sources of new antibiotics during the last 10 years."

Compilation of the 700 page handbook was done by Dr. Max W. Miller, a Pfizer research chemist specializing in fermentation chemistry and the isolation of microbial products.



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GRAIN DRYER COMPARISON CHART

	ARID-AIRE	Brand A	Brand B	Brand C	Brand D
NON-CLOGGING DESIGN — Grain dryed, not "baked", on constantly moving apron.	YES	NO	NO	NO	NO
FULLY AUTOMATIC — Continuous flow operation . . . no loading and unloading.	YES	YES	YES	NO	YES
DRYING CAPACITY — Will match any dryer of comparable cost.	YES	YES	YES	NO	NO
SAFETY FIRST DESIGN — Assures lowest fire insurance ratings.	YES	NO	NO	NO	NO
ASSEMBLY COSTS AT INSTALLATION SITE.	NONE	All ordinary dryers require assembly at elevator. This cost varies and can run as high as $5,000 or more.			
OPERATING COSTS — Fuel, electricity, labor.	LOW	Med.	Med.	High	Med.
COMPACT, PORTABLE — Can be moved with drying "season."	YES	NO	NO	YES	NO
DESIGN MAKES CUSTOM DRYING PROFITABLE.	YES	NO	NO	NO	NO
HAS SUBSTANTIAL FUTURE TRADE-IN VALUE.	YES	NO	NO	YES	NO
WORLD'S EASIEST TO TRY AND EASIEST TO BUY GRAIN DRYER.	YES	NO	NO	NO	NO

Owners Viewpoint:

"After we began drying grain with ARID-AIRE, both state and county ASC office have never refused to accept our dried corn for sealing. They also have taken all our dried grain sorghum. Feed processors making turkey feed have never complained and have always accepted our dried corn for their feeds."

GEORGE ARNOLD
Davis Elevator Co.
Denhart, Iowa

Before you buy, compare ARID-AIRE with any other grain dryer made!

Feature for feature, point for point, *compare* the ARID-AIRE Grain Dryer with any other on the market today. You'll see why ARID-AIRE is not just equal — but *superior* to every other brand. Before you buy any grain dryer, talk to an ARID-AIRE representative or talk to an ARID-AIRE owner! You'll be more convinced than ever that ARID-AIRE is today's soundest grain dryer investment!

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WORTH LOOKING INTO

NEW PRODUCTS • NEW SERVICE • NEW LITERATURE

DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7710—Bulk Scale

Burrows Equipment Co. has announced what it describes as a new improved Model 1500 Weigh Burro

bulk scale that accurately weighs any lot of material while it is being moved.

According to the manufacturer, a new, larger size dump gate located at the front of the hopper makes for a quicker discharge. A new type scale combined with redesigned hopper is said to make for greater accuracy in weighing small amounts, even down to ½ lb.

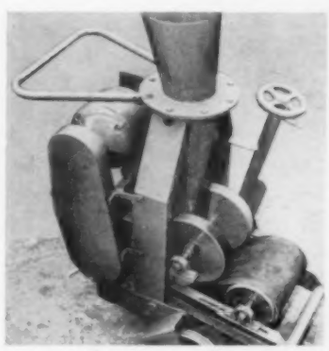
For additional information, check No. 7710 on the coupon and mail.

No. 7711—Portable Loader

Announcement of a new portable, wheel-mounted Ft. Worth Speed Loader for varied use in distributing dry, free-flowing bulk materials (granules or lumps up to 2-in. diameter) has been made by Ft. Worth Steel & Machinery Co.

The loader is designed to load large flat storage areas; boxcars, bins and other enclosures; and build stock piles. It can also be used to turn and condition material.

Described as easy to move, the CWM Speed Loader is mounted on rubber-tired wheels with anti-friction bearings. Back wheel is swivel-mounted for easy steering. Loader is operated from floor level. Material is fed from either fixed or portable overhead conveying equipment. Dropping into the loader's vertical spout, material is thrown in a compact stream by the unit's endless conveyor belt



traveling at high speed on two pulleys. Direction of throw and angle or trajectory can be adjusted while loader is operating. The manufacturer says the loader throws up to 8,600 cu. ft. of material per hour, up to 25 ft. high, with throwing radius up to 50 ft.

For additional information, check No. 7711 on the coupon and mail.

No. 7712—Livestock Tablets

The availability of Calf Builder Tablets, a product that is described as being formulated to combat bac-

terial scours and bacterial pneumonia in calves, lambs, cattle, sheep and hogs, has been announced by Myzon Laboratories.

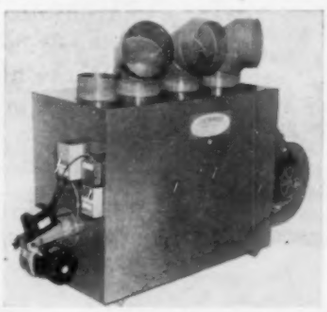
The tablets are said to provide Terramycin to fight infections, vitamins A and D to help build up disease resistance, and two extra ingredients—cobalt and vitamin B_{12}—to improve assimilation of the antibiotic and vitamins into the blood stream.

For additional information, check No. 7712 on the coupon and mail.

No. 7713—Poultry House Heater

Electronics, Inc., has announced that poultry raisers can cut heating costs 30 to 40% because of an unusual feature in its Electro-Magic Heaters.

The Model 800 Electro-Magic Heater is said to have very little stack loss of heat because of a special design which pulls the hot air from



around the stack and up under the roof and mixes this with the fresh air. This, says the manufacturer, gives the reduction in heating costs.

The unit puts out over 200,000 BTUs of heat and delivers 2,500 cu. ft. of air per minute in a thermostatically-controlled system. The heater can be suspended or installed anywhere in the brooder house.

The Model 800 comes either gas or oil fired. For additional information, check No. 7713 on the coupon and mail.

No. 7714—Antibiotic Treatment for Livestock

Abbott Laboratories has announced introduction of Gallimycin Injectable, an antibiotic treatment for beef and dairy cattle, hogs and sheep.

Hog diseases against which Gallimycin Injectable is said to be effective are: baby-pig scours, pneumonia, flu, rhinitis, bronchitis, plus leptospirosis, mastitis and metritis in sows.

In both beef and dairy cattle, Gallimycin Injectable, according to the manufacturer, treats shipping fever, pneumonia and foot rot, plus mastitis and metritis in dairy cattle.

For additional information, including separate folders for beef, dairy and hog producers, check No. 7714 on the coupon and mail.

No. 7715—Grain Drier Literature

Aeroglide Corp. has announced that a new color folder on its grain driers is now available. The literature illustrates drier features and how they are combined to offer a new concept in the control of grain conditioning, says the manufacturer.

Among material discussed in the folder is the new "Centrilector," a dust recovery system that is said to minimize "hidden losses," dust problems and reduce required attention. For a copy of this folder, check No. 7715 on the coupon and mail.

Grain Moisture Study

A study of grain moisture and its effect on profits is now available in book form from Radson Engineering Corp., publisher of the book.

The book, entitled "Grain Moisture Management," is said to cover all aspects of moisture management from harvesting through final storage and use.

Co-authored by Prof. F. W. Andrew, agricultural engineering department, University of Illinois, and Dr. V. W. Davis, agricultural economist, U.S. Department of Agriculture, the book discusses the dollar value of moisture in grain. The need for frequent testing to control grain quality and to insure maximum profits is graphically shown.

Free copies of the book are available from Radson Engineering Co., Macon, Ill. Any quantity may be ordered. However, a nominal charge of 25¢ per book is necessary to cover handling and shipping costs.

No. 7716—Steam Generator

A new steam generator that is said to automatically indicate any cause of safety shutdown due to ignition failure, or shortages of water, fuel, electricity or combustion air, has been announced by the Clayton Manufacturing Co.

The new unit, called the "boiler with a brain," delivers 5,000 to 6,000 lb. of steam per hour at both high and low pressures. In multiple installations, it meets requirements ranging up to 72,000 lb. steam per hour or higher, depending on application, says the manufacturer.

Offered as standard equipment with

Send me information on the items marked:

- ☐ No. 7710—Bulk Scale
- ☐ No. 7711—Portable Loader
- ☐ No. 7712—Livestock Tablets
- ☐ No. 7713—Poultry House Heater
- ☐ No. 7714—Antibiotic
- ☐ No. 7715—Grain Drier Literature
- ☐ No. 7716—Steam Generator
- ☐ No. 7717—Steel Building Booklet
- ☐ No. 7718—Bulk Feed Bin
- Grain Moisture Study

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the Model R-175 is a Safety Lockout Annunciator System that operates by means of indicator lamps located on the control panel of the steam generator. In normal operation, none of the indicator lamps are activated.

The manufacturer says that "in case of water shortage, over-firing, or the presence of any factor leading to excessive temperatures, the thermostat lamp lights to point out the cause of burner shutdown. Other lamps indicate such malfunctions as fuel failures, a too-high or too-low oil level in the pump crankcase, damper failures, insufficient forced draft air pressure on gas-fired models, and electrical overloads, shorts or low voltage.

Other features of the Model R-175 include an automatic oil level safety control and a new cooling system in the pump heads.

For additiional information, check No. 7716 on the coupon and mail.

No. 7717—Steel Building Booklet

The Columbian Steel Tank Co. has announced the availability of a new booklet entitled "Rigid Frame Steel Buildings." Contents of the booklet include examples of steel buildings, including a section illustrating rigid frame steel buildings for grain storage.

Color is used in the 24-page brochure to illustrate new color panels. Other information pertains to details of structural features — facts about construction, expansion, insulation and architectural and economic advantages.

For a free copy of this booklet, check No. 7717 on the coupon and mail.

No. 7718—Bulk Feed Bin

Chore-Boy Manufacturing Co. has announced development of a bulk feed bin that is said to stop bridging and maintain a steady supply of feed.

Built in section form so that different capacities are available as required, the bulk feed bin is equipped

with a steel mesh and continuous-belt conveyor at the bottom of the hopper opening. Covering the entire opening, the conveyor carries off all of the feed at that point, eliminating leftover spaces in the hopper in which feed could collect, says the manufacturer. "Because the feed is kept moving while the conveyor's electric power is on, the bottom is literally pulled out from under the load, keeping the feed in a steady state of movement," officials said.

Another feature of the Chore-Boy system is a flexible, "around-the-corner" auger. This auger is said to require one source of power to move feed in any direction. Straight sections, encased in sheet metal, are coupled directly to fiberglas-housed curved sections. Inside the auger, fiberglas flighting is used on a flexible spring-steel core, allowing the movement of feed smoothly through curves. Connections between sections are watertight, and metal housings are hot-dipped galvanized.

The bulk feed bin is available in various capacities. For additional information, check No. 7718 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jottmg the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7619—Feed additive for swine, Merck & Co., Inc., chemical division.

No. 7620—Pour-on insecticide for cattle, Dow Chemical Co.

No. 7621—Receiving scales bulletin, Richardson Scale Co.

No. 7622 — Motor driven piston pump, Hypro Engineering Co.

No. 7623—Elevator leg, bucket elevator catalog, Huss & Schlieper.

No. 7624 — Weigh buggy, Leach Manufacturing Co.

No. 7625—Magnetic separator bulletin, Dings Magnetic Separator Co.

No. 7626 — Self-contained scales, Fairbanks, Morse & Co.

No. 7627—Egg grader, Big Dutchman Automatic Poultry Feeder Co.

No. 7628—Fermentation nutrients catalog, Amber Laboratories, Inc.

No. 7629—Water medication solution, Merck chemical division.

No. 7630 — Magnet for hardware disease, Arnold Engineering Co.

No. 7631—Poultry vaccine, American Scientific Laboratories, Inc.

No. 7632—Feed weigher, Leach Manufacturing Co.

No. 7633—Water medication proportioner, Vineland Laboratories, Inc.

No. 7634—Dust filter bulletin, The Day Co.

No. 7635—Growth stimulant for cattle, Nopco Chemical Co.

No. 7636—Paddle conveyor unit, FMC Bulk Transport Systems.

No. 7637—Air vibrator clamp, The Cleveland Vibrator Co.

No. 7638—Chain drag, Sprout, Waldron & Co., Inc.

No. 7639—Hog house automation, Big Dutchman Automatic Poultry Feeder Co.

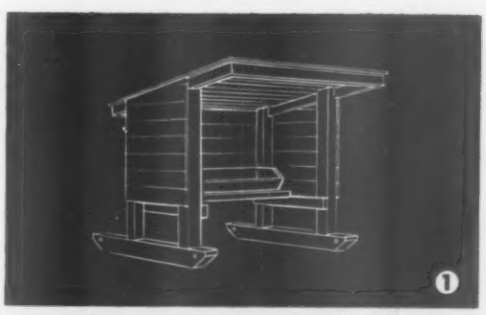
No. 7640—Pneumatic vibratory feeders, National Air Vibrator Co.

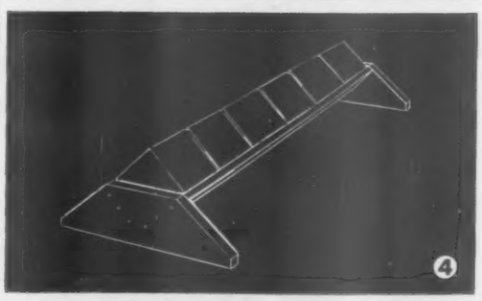
No. 7641 — Medication for calf scours, Dairyland Food Laboratories, Inc.

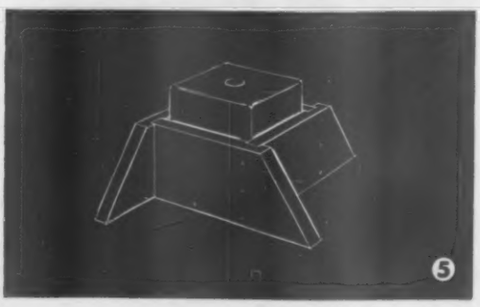
No. 7642—Diverter valves, Systems Engineering & Manufacturing Co., Inc.

No. 7643—Automatic moisture controls, The Mathews Co.

No. 7644—Pig scours literature, Hess & Clark.







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These safe, simple and long-lasting feeding stations were designed by Morton four years ago. Since then, thousands have been built from these plans, distributed through Vo-Ag teachers and County Agents. Now we're offering them—*through you*—to the farmers and stockmen of America!

These plans will be advertised in full-page ads in leading farm magazines. But your customers will have to come to you to get them! Contact your Morton Representative for your free supply now—or write Morton Salt Company, 110 N. Wacker Drive, Chicago 6, Illinois.

1 CATTLE FEEDER Has divided mineral box that can be removed for cleaning. Can be moved on sturdy skids to any part of range or pasture.

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3 HOG FEEDER Wide roof overhang keeps minerals dry. Roof is hinged and braced for easy cleaning.

4 MULTIPLE BLOCK FEEDER Keeps salt and minerals off the damp ground, prevents "wet bottom" block waste.

5 BLOCK HOLDER Eliminates dangerous metal stake block holders—build this block box from a single length of 2 x 10!

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No. 7645—Sealing device, Vineland Poultry Laboratories.

No. 7646 — Fabric cement, Val-A Co.

No. 7647—Grain bin sweep, Wyatt Manufacturing Co., Inc.

No. 7648—Concentrate with weatherizing agent, Lamkin Brothers.

No. 7649 — Stencil roller, Marsh Stencil Machine Co.

No. 7650—Rotary valves, The Day Co.

No. 7651 — Pneumatic feeder, National Air Vibrator Co.

No. 7652 — Grain trailer, Wilson Trailer Co.

No. 7653—Vitamin A product, Nopco Chemical Co.

No. 7654—Elevator, feed mill designs, T. E. Ibberson Co.

No. 7655 — Pneumatic bulk feed truck, Sprout, Waldron & Co., Inc.

No. 7656—Quaternary compounds, Rohm & Haas Co.

No. 7657 — Beef cattle feeding guide, Merck & Co., Inc.

No. 7658—Feed, flour bag prints, Bemis Bro. Bag Co.

No. 7659—Stilbestrol pellet, Discan Corp.

No. 7660 — Auger drag feed unit, Art's-Way Mfg. Co.

No. 7661 — Anti-anemia feeding supplement, Products Marketing Service.

No. 7662 — Electric bin vibrator, Cleveland Vibrator Co.

No. 7663—Injectable iron for pigs, American Scientific Laboratories, Inc.

No. 7664—Grain leveler, Lennox Industries, Inc.

No. 7665—Portable transfer unit, The Fuller Co.

No. 7666—Small animal warmer, Rhinehart Manufacturing Co., Inc.

No. 7667—Feed, grain conveyor, LML Engineering & Manufacturing Corp.

No. 7668—Liquid protein supplement, The Wisconsin Liquid Feed Corp.

No. 7669—Bucket conveyor, Clermont Machine Co., Inc.

No. 7670—Reference table for bag material, St. Regis Paper Co.

No. 7671—Mastitis treatment, Hess & Clark.

No. 7672—Package milling unit, Jacobson Machine Works, Inc.

No. 7673—Hopper car vibrator, Martin Engineering Co.

No. 7674—Bulk feed transport body, Baughman Manufacturing Co.

No. 7675 — Duo-directional auger, Wyatt Manufacturing Co., Inc.

No. 7676—Weather effect on business, St. Regis Paper Co.

No. 7677—Scoop auger, Sudenga Industries, Inc.

No. 7678—Controlled feeding of liquids, solids, B-I-F Industries.

No. 7679—Control panel indicating light, Semco Electric Controls, Inc.

No. 7680—Front end loaders, The Frank G. Hough Co.

No. 7681—Antibiotic for CRD, Elanco Products Co.

No. 7682—Poultry performance calculator, Cobb's Pedigreed Chicks, Inc.

No. 7683—Rat extermination, Hess & Clark.

No. 7684—Feed flavoring handbook, Flavor Corp. of America.

No. 7685—Tramp Iron Drum Separator, Eriez Manufacturing Co.

No. 7686—Bulk truck, Winger Manufacturing Co.

No. 7687—Calf raising handbook, Wirthmore Feeds, Inc.

No. 7688—Base for calf milk replacers, Borden Special Products Co.

No. 7689—Antibiotic for swine, Elanco Products Co., Div. of Eli Lilly & Co.

No. 7690—Horizontal batch feed mixer, Sprout, Waldron & Co., Inc.

No. 7691—Pfizer activity review booklet, Chas. Pfizer & Co., Inc.

No. 7692 — Fluid pump, Clayton Manufacturing Co.

No. 7693—Lightweight bin vibrator, Martin Engineering Co.

No. 7694—Equipment leasing plan, Nationwide Leasing Co.

No. 7695—Promotion for mastitis medication, The American Cyanamid Co.

No. 7696—Dried beet pulp, The I. S. Joseph Co., Inc.

No. 7697 — Equipment brochure, Edw. Renneburg & Sons Co.

No. 7698 — Pneumatic conveying system, Sprout, Waldron & Co., Inc.

No. 7699—Fortification of feedlot rations, Vit-A-Way, Inc.

No. 7700 — Suspended separation magnets, Indiana General Corp., Stearns Division.

No. 7701 — Conveying, tubing elbows, Systems Engineering & Manufacturing Co.

No. 7702—Temperature measuring system, Radson Engineering Corp.

No. 7703—LP-Gas stock tank heater, Brower Manufacturing Co.

No. 7704 — Pressurized bulk feed truck, Sprout, Waldron & Co., Inc.

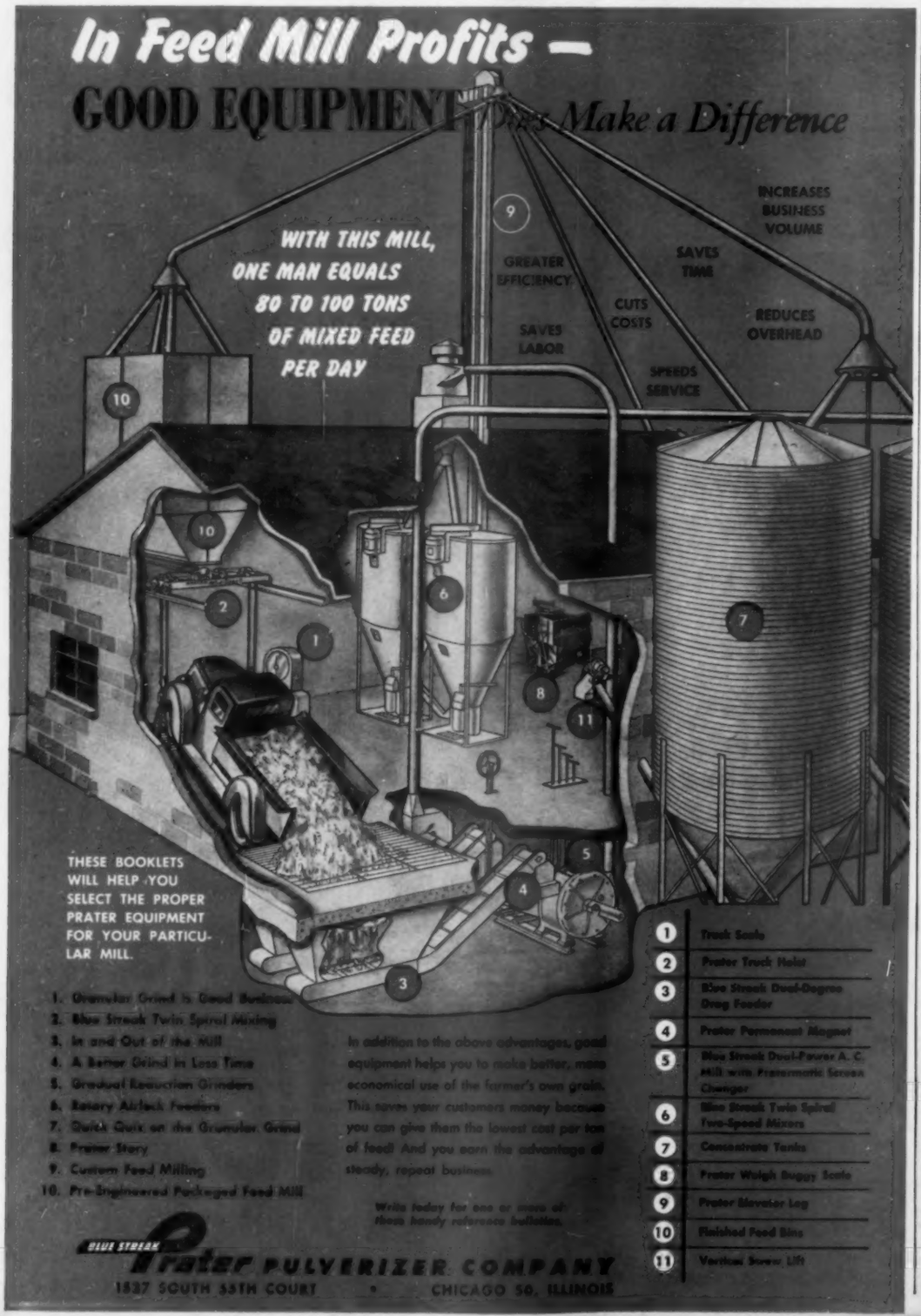
No. 7705—Belt selection guide, The Imperial Belting Co.

No. 7706—Fiberglas storage tanks, Tryco Manufacturing Co., Inc.

No. 7707—Continuous weighing system, Industrial Powertronix, Inc.

No. 7708—Automatic control panel, Thayer Scale Corp.

No. 7709—Sow milk tablets, Agri-Tech, Inc.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Study Indicates Good Market for 'Premium' Broilers

NEW BRUNSWICK, N.J. — "A sizeable consumer market for premium quality broilers exists," according to the findings of a retail broiler sales study reported by Rutgers University.

The experiment—conducted in four supermarkets located within a 15-mile radius of the university campus to determine consumer response to varying premiums for better quality (premium) broilers when merchandise alongside the retail stores' regular-quality broilers—resulted in these findings:

1. Virtually the same average daily gross receipts resulted with a premium of 2 or 3¢; gross returns were lowest when the premium was held at 4¢; dollar sales at the lower premiums were about 5% greater than with the 4¢ premium.

2. Where offered side by side in a display case, the sales of regular broilers exceeded those of premium birds.

3. Average daily sales of premium birds did not change as much as sales of regular birds when retail prices were changed.

4. Sales of broilers varied according to the way they were cut. At all price levels, sales of quartered birds (two legs-and-thigh combinations and two breast-and-wing combinations per package) exceeded the sales of splits (two half-broilers per package).

5. At all price levels, the retailer's percentage markup for regular broilers exceeded the percentage markup for premium birds selling at a 1¢ premium. However, when a 2, 3 or 4¢ markup was made on the premium quality chicken, the percentage markup realized by retailers was higher for the premium chicken.

A report on this study, written by Dr. Ronald Gatty and Alan Meredith, Rutgers department of agricultural economics, appeared in the July-August issue of "New Jersey Agriculture," an extension publication.

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Omafac-S is a new, highly concentrated source of Unidentified Growth Factors essential in every broiler ration. The Nutritionist uses just 0.35% Omafac-S to replace 4.0%-5.0% *crude* UGF sources. He therefore supplies UGF at lower cost—and gets the *extra* benefits in Omafac-S such as antibiotic activity, protein, calcium, phosphorus and uniformly high vitamin B_{12} content.

Squibb produces Omafac-S from dried penicillin and streptomycin residues. Omafac-S is *dependable* because the analysis on the label is guaranteed, and it is available year around. Write for more facts.

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[1] Patent applied for

•"OMAFAC" ® is a Squibb trademark

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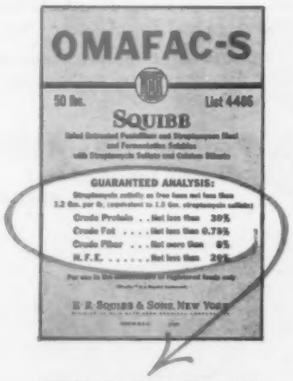
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Farm Commodity-Feed Price Ratios

	U.S.	New Eng.	Mid-Atl.	East North Cent.	West North Cent.	South Atl.	East South Cent.	West South Cent.	Mount.	Pac.
CHICKEN-FEED— Farm Chickens:										
September, 1961	2.5	2.7	3.6	2.7	2.1	3.0	3.0	2.9	2.8	2.1
August, 1961	2.8	2.9	4.0	3.0	2.3	3.1	3.3	3.1	2.9	2.1
September, 1960	3.6	3.9	4.5	3.9	3.6	3.8	3.7	3.3	3.4	2.9
Average (1950-59)	5.0									
Average (Sept., 1950-59)	4.7									
Broilers:										
September, 1961	2.5	3.1	3.4	2.6	2.8	2.5	2.3	2.4	3.2	2.8
August, 1961	2.8	3.0	3.5	3.1	2.9	2.7	2.6	2.7	3.2	3.0
September, 1960	3.5	3.9	4.5	3.7	3.8	3.4	3.3	3.4	3.9	3.9
TURKEY-FEED—										
September, 1961	5.4	7.2	7.6	5.9	5.7	5.5	6.1	5.9	5.9	4.7
August, 1961	5.8	7.3	7.8	6.0	6.6	5.5	5.9	5.9	6.1	5.2
September, 1960	7.4	7.9	8.5	7.8	8.8	6.6	6.9	7.4	7.2	6.6
Average (1950-59)	8.0									
Average (Sept., 1950-59)	7.8									
EGG-FEED—										
September, 1961	10.4	12.0	11.8	10.2	9.4	10.7	11.4	11.2	11.0	8.9
August, 1961	10.3	13.1	11.4	10.0	9.8	10.3	11.0	10.4	10.6	8.9
September, 1960	11.7	14.8	13.5	10.6	10.5	12.5	11.7	11.6	11.6	10.4
Average (1950-59)	10.7									
Average (Sept., 1950-59)	11.6									

	U.S.	North Atl.	East North Cent.	West North Cent.	South Atl.	South Cent.	West
MILK-FEED—							
September, 1961	1.49	1.43	1.47	1.59	1.62	1.54	1.36
August, 1961	1.42	1.38	1.41	1.53	1.55	1.45	1.31
September, 1960	1.51	1.49	1.46	1.61	1.63	1.56	1.41
Average (1950-59)	1.31						
Average (Sept., 1950-59)	1.37						
BUTTERFAT-FEED—							
September, 1961	25.0	...	20.9	24.7	...	17.1	18.6
August, 1961	25.2	...	20.8	24.9	...	17.0	18.7
September, 1960	25.0	...	20.5	27.4	...	16.9	18.8
Average (1950-59)	22.4						
Average (Sept., 1950-59)	22.3						

	U.S.	North Cent.
HOG-CORN—		
September, 1961	16.8	17.3
August, 1961	16.5	16.9
September, 1960	14.8	15.3
Average (1950-59)	13.7	14.1
Average (Sept., 1950-59)	13.7	14.0

NOTE: Ratios computed at mid-month by U.S. Department of Agriculture. Ratios represent number of pounds of poultry feed equal in value to 1 lb. live farm chicken, turkey or 1 doz. eggs; pounds broiler growing mash equal to 1 lb. broiler; pounds concentrate rations equal to 1 lb. milk or butterfat; bushels of corn equal to 100 lb. hog. Increases in ratios are favorable to the feeder

KEY TO GEOGRAPHICAL DIVISIONS

Here is a guide to the states included in the geographical divisions listed in the accompanying commodity-feed price ratios:

New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

Mid-Atlantic: New York, New Jersey, Pennsylvania.

North Atlantic: New England and Mid-Atlantic states combined.

East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin.

West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

North Central: Combination of the two foregoing.

South Atlantic: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

East South Central: Kentucky, Tennessee, Alabama, Mississippi.

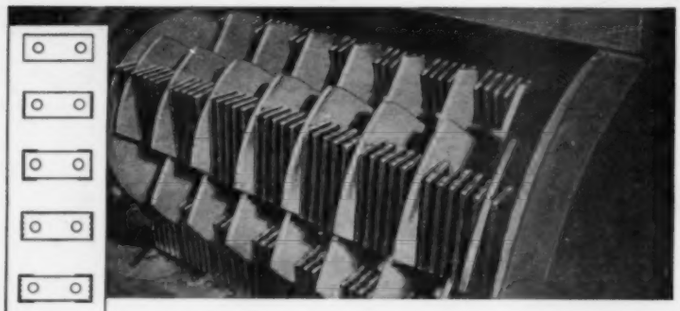
West South Central: Arkansas, Louisiana, Oklahoma, Texas.

South Central: Combination of the two above.

Pacific: Washington, Oregon, California.

Mountain: Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Montana.

West: Combination of the two above.



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'Canadian Railways to Bid for Lost Business'

TORONTO—The Ontario Elevators Assn. has announced in a bulletin to its members that "rate spread between rail and truck carriers will be a thing of the past if reported intentions of the railway companies materialize."

The bulletin stated that "having lost a major portion of the Ontario grain movement to truck competition, the railways are launching a determined bid to recapture this business. Going beyond the basis of privately negotiated or agreed rates, the rail carriers will operate under published tariffs that are competitive with truck charges.

"Soybeans is the first commodity to come under the new order, with rates being cut by over 50%," the bulletin said. "The revised tariff reportedly applies to minimum cars of 100,000 lb. Unavailability of cars of this carrying capacity or other conditions of unavoidable character that prevent minimum loadings are not expected to deprive the shipper of the new rate advantage."

One spokesman said that "from notice of intention given by railway freight agents, the railways have no notion of conceding the short-haul out-of-port movement to truck carriers. In response to the expressed opinion that competitive rates would not compensate for the saving in unload labor cost, it was indicated that the saving in transportation cost would more than cover car emptying expenses."

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Data accumulated during years of continuous study confirm the superior stability of Hetrogen K Premix. Hetrogen K Premix is available in a full range of potencies on stabilized calcite or soybean meal carriers. Stabilized corn meal or wheat middlings carriers also available if desired.

Let us give you all the facts and research data about Hetrogen K

Should Laying Diets Be Changed as the Egg Production Period Progresses?

A Texas Experiment Suggests There Is A Real Place For 'Starter,' 'Developer' and 'Finisher' Diets

By J. H. Quisenberry and E. C. Coligado
Texas A&M College

The answer to the title question is "yes." Much information is now needed as to what changes will give maximum performance at minimum cost. Considerable attention has been given to methods of growing egg-production type pullets that would reduce the number of small and medium size eggs at the beginning of the production period without resulting in an egg that would be too large towards the end of the laying year. Less attention has been given to ways of feeding the laying bird herself to accomplish these ends.

During the growing period, it is customary to feed the pullet a "starter diet," followed by a "developer." Work in progress in the Department of Poultry Science is attempting to determine if "starter," "developer" and "finisher" diets for the laying period would be just as appropriate as for the growing period. Results to date look promising. Additional refinements to this new concept of feeding laying hens are under study.

Protein levels in laying diets higher than the 15% currently recommended by the National Research Council have given larger body and egg sizes and higher rates of lay at the Texas Agricultural Experiment Station. Changing the protein and energy levels of the diets as the egg production period advanced was compared in 1960 with the continuous feeding of the same diets throughout the laying period. Two diets with 18% protein, one of all plant origin and the other of mixed plant and animal origin, and two 14% diets of the same types were used. One 18% diet of all plant origin and one of mixed origin also were fed for 2 months, then the protein was lowered to 17% for 2 months, to 16% for 2 months and then dropped to 14% for the last six of the twelve 28-day laying periods. Conversely two diets, one of all plant and one of mixed plant and animal origins, were started with 14% protein, increased to 16% after 2 months, and to 17% after 2 more and to 18% after 2 additional periods. These groups received the 18% diets for the last six of the twelve 28-day periods.

This experiment showed that the higher protein level would give larger eggs and more of them on less feed. It also revealed that a 14% protein diet made up of all plant sources gave significantly better performance than a 14% protein diet made up of a mixture of poultry by-products and soybean oil meals, although the latter diet contained a slightly higher level of the critical amino acids lysine and methionine.

Also shown by this experiment was that starting the laying period

EDITOR'S NOTE: *The accompanying article suggests that there will be a real place for different feeds as the laying period progresses. The article is from the Texas Feed Service Report, issued by Texas A&M College, College Station. Dr. Quisenberry is head of the poultry science department, and Mr. Coligado is a research assistant.*

TABLE 1. Composition, Energy Content and Ingredient Cost of the Diets Containing Different Levels and Sources of Protein

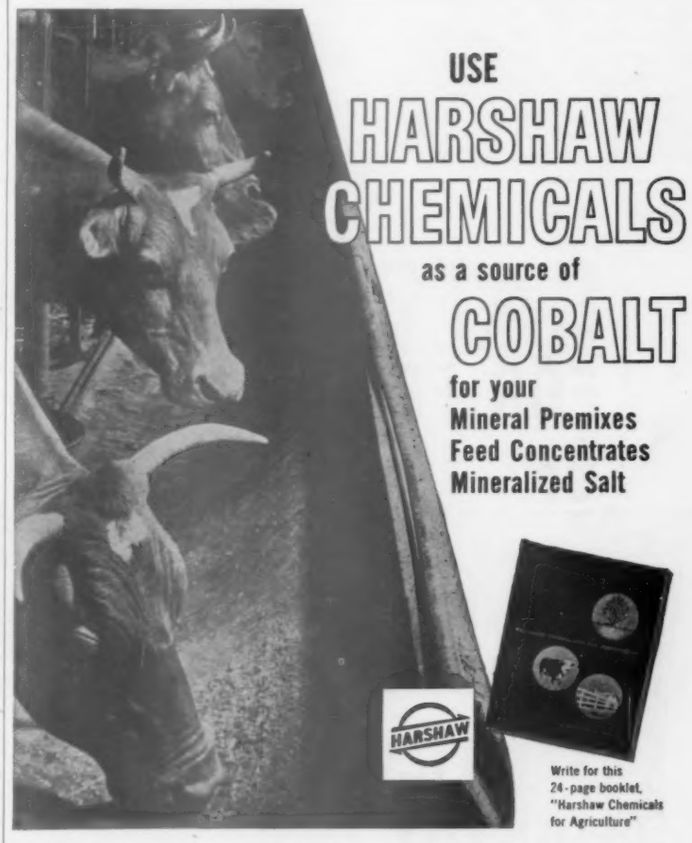
Ingredients	Protein	Percentage of each diet* "A" diets 14-A	16-A	17-A	18-A	"B" diets 14-B	16-B	17-B	18-B
Ground sorghum grain		56.70	51.66	48.63	45.60	55.80	49.50	46.47	43.30
Ground yellow corn		20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Soybean oil meal (44%)		6.80	8.84	11.87	14.90	9.51	15.67	18.63	21.73
Poultry by-product meal (55%)		2.00	5.00	5.00	5.00	....	....	....	....
Alfalfa leaf meal (20%)		3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Corn distillers dried solubles		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Oyster shell flour		4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Defluorinated rock phoshate (19% P)		2.50	2.50	2.50	2.50	2.69	2.83	2.90	2.97
Vitamin-antibiotic mix‡		2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Salt		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Total§		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Calories per lb. (productive energy)		950.3	933.3	916.9	900.5	937.6	902.8	886.0	868.5
Cost per 100 lb. ($)**		2.79	2.87	2.91	2.96	2.80	2.88	2.93	2.97

*In the column headings, the numerical figures refer to the calculated protein in per cent, and the letter "A" refers to the diets where poultry by-product meal contributes part of the protein, and the letter "B" refers to the diets with all-plant protein.

‡Consists of: 20 lb. dry fish solubles; 10 lb. delactosed whey product; 5 lb. antibiotic fermentation solubles; 4 lb. (25%) choline chloride; 1 lb. stable dry vitamin A (10,000 I.U. per gram); 1 lb. vitamin D_3 dry supplement (3,000 I.C.U. per gram); 4 grams riboflavin; 10 grams calcium pantothenate; 25 grams niacin; 12 milligrams vitamin B_{12}; 10 grams penicillin; 10 grams bacitracin; 8 lb. soybean oil meal.

§$MnSO_4$ was added at the rate of 11.4 grams per 100 lb. in all the diets.

**Computed from actual purchase price of ingredients used in the experiment. (Costs are for ingredients only.)



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at 22 weeks of age with 18% protein and gradually lowering the level as the production period proceeded resulted in the lowest feed cost per dozen 24-ounce eggs and a substantial saving of protein. To lower the protein in these diets, sorghum grain was substituted directly for soybean oil meal, thus lowering the protein and at the same time increasing the dietary energy level. By this method, the feed ingredient cost was lowered to 10.64 cents per dozen 24-ounce eggs.

Good Results

Starting birds on the higher protein level and gradually reducing the amount, increased early egg size rapidly and reduced the size late in the production period when the eggs were of sufficient size to bring the optimum price. Rate of production and feed efficiency also were maintained at a comparatively high level.

Composition of the diets used in this experiment is given in Table 1.

Results of this experiment strongly suggest that there is a real place for "starter," "developer" and "finisher" laying diets, and that much research remains to be done to determine the exact composition of the diets that will give the maximum performance at the minimum cost for a given kind of bird in a specified environment. To that end, research is being continued.

Local Advertising Stressed in New Promotion Plans

SAN LEANDRO, CAL.—A California feed-manufacturing cooperative has revamped its advertising program by switching to stronger promotion at the local level. This shift is necessary, the organization believes, to provide greater flexibility and to match "changes which have stirred our agribusiness during the past 10 years and have been felt strongly in northern California."

In its new approach to advertising, Nulaid Farmers Assn. is:

- Selling the advantages of well-planned feeding programs rather than single specific feeds.
- Using local newspaper space and radio time on short-term contracts to provide better timing of sales messages. Advertising copy can be changed on short notice to meet the needs of a particular season.
- Using outdoor signs and billboards and consistent small space in newspapers as the basic media for continuous reminder advertising.

Reported in Publication

Details of Nulaid's feed advertising program are reported in a recent issue of the association's Nulaid News.

A different approach in communications is called for, the association relates in its publication, because: Spreading population has dried up older areas of agricultural production; NFA, once comprised almost entirely of egg and poultry producing members, is now an important factor in the production of dairy and other livestock feeds, and local radio stations and newspapers, which have met the challenge of change by improving the quality of their farm news coverage, can concentrate on farm production problems specific to the areas they serve.

Except for one modest schedule, Nulaid has pulled its advertising out of farm magazines because of plans to limit the area covered by the association. And larger radio stations are being left out of advertising scheduling because "for example, none of the San Francisco Bay area radio stations has a full time farm news director. Their farm news is generally broadcast between 5 and 6 a.m.—apparently on the theory that this is the time farmers have finished their 'chores' and are just sitting down to a hearty breakfast and have a half hour break to catch up with the latest news."

NFA's "reminder" advertising program, using outdoor signs and small space newspaper advertising, carries consistent messages which stress specific feeding programs and emphasize quality control.

Newspapers included in Nulaid's advertising schedule are supplied with advertising mats "to hold down preparation expense and to give ads better appearance."

Most of the radio stations broadcasting Nulaid's local-emphasis commercials carry an average of 5 spot announcements per week for 18 weeks. "These are not run consecutively," NFA's publication explains, "but are spread out for use at strategic times throughout the year. Timing is determined by needs of the particular area."

G.L.F. Explains New Marketing Program for Eggs in Northeast

ITHACA, N.Y.—Development of a new egg marketing program in the Northeast has been explained by Cooperative G.L.F. Exchange, Inc., Ithaca, in one of its publications.

Harry J. Muller, manager of the co-op's egg marketing division, said that the new program was necessary to assure the division of a continued supply of quality Nearby eggs for further development of premium egg outlets.

"Producers will be assured a guaranteed market and a guaranteed price for a quality product which will net them maximum returns year round," said Mr. Muller. Signing of producer agreements was scheduled to start this month.

Mr. Muller stated that the agreement also provides for a producers' profit-sharing pool which will give agreement shippers an opportunity to share the net margins of their marketing cooperative.

Producers who sign the agreement have two options: (1) Ship all eggs produced to G.L.F.; or (2) ship a guaranteed minimum percentage of their production. Producers must meet certain management and husbandry standards to qualify, the egg division manager said.

He pointed out that G.L.F. will provide free pickup and cases, will pay a guaranteed price related to Urner-Barry quotations for Nearby Extra Fancy Heavyweight eggs, and will guarantee a year round market.

The co-op will wash eggs in the plant for a fee of ½¢ per dozen. This service is presently available at Hightstown and Weedsport, but will be available at other stations where surveys show enough producers desire it. This agreement is available only to G.L.F. members, said Mr. Muller.

"We must have assured supplies and we must have quality eggs," stated the manager. "Variation in either one jeopardizes the business we have built up with premium outlets. This agreement enables us to expand our present premium outlets for Nearby eggs, and thereby benefits nearby producers.

"We will have 80% of our needs for Fancy Nearby cartoned eggs supplied by poultrymen who sign agreements. Therefore, this agreement is presently available to a limited quota of producers. Additional producers may qualify as we expand our markets for premium Nearby Eggs."

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KEY FACTOR

(Continued from page 16)

according to formula, (5) improper mixing, (6) faulty equipment, (7) mixer or flow contamination, (8) separation following mixing, and (9) faulty sampling.

Turning to containers for samples, it was said that metal to metal cans are recommended for holding samples. They normally hold 6 oz. and a tape can be run around the edge of the cap and can to seal them. Cloth or paper envelopes are also used, as are airtight, screw cap containers. The latter are most apt to drop and break, however, it was pointed out.

Once a lab analysis has been obtained, it should be compared to the specifications and ingredients failing to meet specifications should be called to the attention of supplier. Often rebates may be obtained or shipment may be refused if error is excessive.

The key analysis should consist of protein, fat, fibre; drugs; ash—calcium and phosphorus, and adulterants.

If a mill has a chemist, his duties normally should consist of laboratory analysis; help with formulation and purchasing departments to establish specifications for inbound ingredients; checking finished feeds; making recommendations for formulae adjustments; assisting production department to solve and correct production problems; supplying specific analytical information necessary to correct or reprocess ingredients or finished feeds; assist in checking out complaints; maintaining proper controls for drugs to meet FDA requirements, and keeping permanent records of analytical data.

Micro-Mixing

On micro-mixing the analogy was drawn that mixing fundamentals are to the feed industry as blocking and tackling fundamentals are to a good football team. You can manufacture feed without them—but you will never play in an all-star game, said Hal Whiteside, Dawe's Laboratories, Ft. Worth, who conducted the sessions on micro-mixing.

There is a need for great improvement in finished product quality, he emphasized. Discrepancies may be noted in almost any state feed control publication, he said. As examples, he noted a coccidiostat content claimed 0.015% and found 0.01%, an error of 33⅓% minus; or an arsonic compound claiming 0.01% and found 0.0147%, error of 47% plus.

The micro particle content of finished feeds is so low as to be a cause for concern on its own merit, he said.

"As many of you know, the addition of Vitamin B_{12} is quite common at the 6 mg. per ton level. This, then, demands the ability to distribute 6 mg. with 908,000,000. This is 0.00000066%. Let's assume that a baby chick eats 10 gm. per day for each of the crjtical first five days. We may also assume that it needs a complete diet in each 1/10 of its daily intake—each 1 gm.! Further recognize that we add many micro nutrients at 10 gm. or less per ton. We may, therefore, conclude that in each 10 gm. we add we should have 908,000 particles—41,223,200 particles per pound," he said.

He pointed out that Dr. Walter Glista of Wirthmore Feeds noted at the Feed Production School that of 538 assays from Texas Feed Control Reports 44% were off 10%, 17% were off 10 to 20% and 38% were off 20% or more.

To product limitations should be added electrostatics, insufficient particles, agglomeration, hygroscopicity, antimosity, stability, availability and temperature of melting.

The finest mixing equipment, best products, perfect procedure, etc., in the hands of a careless or uninformed employee are not as desirable as mediocrity in excellent hands, he said.

He then traced the mixing procedure through vertical, horizontal and drum type mixers citing advantages and disadvantages of each.

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Iowa Feed Men Hear Talks On Nutrition of Beef Cattle

By RUSSELL TOKHEIM
Feedstuffs Staff

AMES, IOWA — Beef cattle performance testing as a part of good management and feeding economies in beef cow raising which also improve reproduction were among the topics discussed during the recent Iowa Feed Conference on the campus of Iowa State University here.

These and reports on numerous other research projects which feed men can use to assist their beef cattle raising customers in the competitive food production field were discussed during the conference attended by over 300 persons.

The program covered new developments in the nutrition of cattle on feed, but attention also was given to beef cow feeding and management. As the supply of western feeder cattle tightens, the livestock industry in the Midwest is moving to production of its own feeder cattle.

PERFORMANCE TESTING IN BEEF CATTLE—Production testing can be part of series of efforts which will result in the consumer getting high-quality beef at prices more competitive with poultry and other meat products, said Dr. Robert deBaca, extension animal husbandman.

He emphasized that production testing is another part of good management and doesn't replace other phases of management, but complements them. "From observing and studying records, cattle producers become more aware of the gaps in their management programs," he commented. "The need for adjustments in feeding, health and time-allocation programs becomes more apparent. Prosperity achieved through these improvements builds enthusiasm for more skill in breeding, management and marketing."

Dr. deBaca pointed out that there are basically five criteria which contribute to profitability and desirability in beef cattle. They are: (1) reproductive regularity, (2) calf growth to weaning, (3) feedlot-gaining ability, (4) efficiency of feed utilization, and (5) carcass merit.

He said that reproductive regularity is not highly heritable, and that procedures which could aid in increasing calving percentage include: (1) culling known non-breeders or shy-breeders, (2) semen testing bulls periodically, (3) pregnancy checking cows and eliminating open cows, and (4) keeping cows in moderate condition—not fat.

He pointed out that calf growth to weaning depends on the calf's growing ability and the mothering ability of the dam. "Since many of the costs of producing a calf are fixed, increased weaning weights should reflect greater profits per cow," said Dr. deBaca. "With cattle being slaughtered at earlier ages, a greater percentage of an animal's life is now in the preweaning period." He added, "Much emphasis on selection is needed in this area."

The Iowa State animal husbandman stated that rate and economy of gains are highly associated, and both traits are moderate to high in heritability. He said that gaining ability can be measured in on-farm performance testing or by submitting animals to central stations for evaluation.

On the subject of carcass desirability, he commented that carcass evaluation of sire progenies is becoming a must.

He pointed out that the role of the feed industry becomes increasingly important since improvements through breeding programs do not replace the need for proper nutrition. "They often require more from the feeding program to achieve their full potential."

FEEDING THE BEEF COW FOR MAXIMUM ECONOMY AND REPRODUCTIVE EFFICIENCY—That high levels of winter feeding for beef cows are uneconomical and also have an unfavorable effect on reproduction was the point made by Dr. S. A. Ewing, assistant professor, animal husbandry, in his talk.

He said that winter feed cost makes up approximately two thirds of the annual feed cost for the beef cow and that any evidence pointing to possible savings is an important contri-

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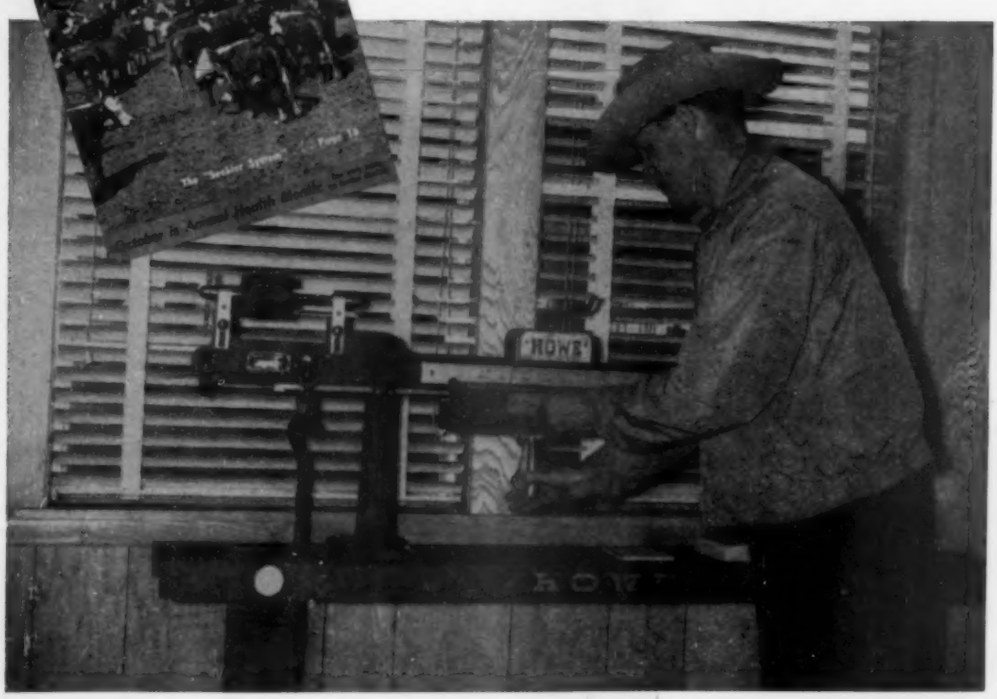

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bution toward economical production.

Dr. Ewing said possibilities for reducing winter feed cost appear to fall into these areas: Reduced level of energy in wintering rations, greater use of low grade roughages, increased utilization of unharvested feeds and use of more economical roughage handling systems.

On the reduced level of energy, Dr. Ewing cited Oklahoma studies and then said that initial observations at the Iowa station have shown daily TDN allowances as low as 7.5 lb. may actually produce excessive winter gains for cows in medium condition in the fall. He said, "It is difficult to make recommendations on feed allowances due to wide variation in feedstuffs, climate and animals. In terms of animal response, however, the following recommendations seem appropriate for economy as well as satisfactory reproductive performance during the lifetime of the beef female bred to calve first at two years of age:

"(1) Fall-weaned heifer calves should be fed to gain 75-100 lb. the first winter.

"(2) Weight loss the second winter should not exceed 10% of the body weight in the fall.

"(3) Weight loss during subsequent winters should not exceed 20% of body weight in the fall."

NEWER DEVELOPMENTS IN BEEF NUTRITION — Covering experiments in beef cattle nutrition at Iowa State was Dr. Wise Burroughs, professor of animal husbandry.

Dr. Burroughs said vitamin A experiments suggested that conversion of carotene to vitamin A in cattle is related to thyroid function. Unexplained field cases of vitamin A deficiency may therefore come from factors influencing thyroid function. It is known that environmental temperature has a strong effect on the thyroid. These factors might also include ration iodine, various dietary factors or thyro-active compounds such as thyroxine or iodinated protein in the rations, he said.

"Goitrogenic substances such as tapazole may also be factors. Nitrates, nitrites, perchlorites and hypochlorites in the diet inhibit the iodine concentrating power of the thyroid gland in synthesizing body thyroxines."

He said, "More experimental work is needed in determining the significance of these thyroidal influencing substances. But, it is suggested as a result of these studies that, until more is known about cattle, an intermediate level of supplement (8,000 to 10,000 I.U. per animal per day) might be adequate for best results.

"The vitamin A studies further suggested that tapazole is a strong liveweight gain sitmulator when used in rations containing less than 1,500 I.U. of vitamin A per pound. Conversely, in cattle rations containing more than 1,500 units per pound—about five times the known requirement for this vitamin—the stimulating effect is largely nullified. Other tapazole experiments demonstrated that a combination of tapazole and a low-level thyroprotein is more effective in stimulating liveweight gain than tapazole alone."

The Iowa State beef researcher pointed out that in a recent 140-day experiment on vitamin A, addition of the vitamin reduced the percentage of choice graded animals. In the control group 71% of the animals graded choice and 29% good while the vitamin A group graded 54% choice and 46% good.

Dr. Burroughs then went on to comment on feeding of a completely mixed, low-roughage fattening ration adapted to mechanized feeding.

He pointed out that addition of 1 to 2% of fine-grain silica sand to these low-roughage rations resulted in increased gains and feed utilization, but produced no beneficial results in rations containing conventional amounts of hay. He said, "These experiments suggest that sand may partially replace roughage in fattening rations.

"Low-roughage, high-concentrate rations were also improved by multiple feeding instead of conventional hand-feeding twice daily. Feeding six times every 24 hours was done by a mechanism which fed the cattle automatically every four hours. In an initial experiment slightly faster rates of liveweight gain and improved feed utilization were obtained. In one experiment this completely mixed ration out-performed a conventional hand-fed corn-hay-supplement ration."

Dr. Burroughs told the group that a low fiber finishing ration now being used at the university includes: Corn, 72.0%; cobs, 10.0; ground alfalfa, 5.0; molasses, 5.0; soybean oil meal, 4.0; minerals, 2.5; urea, 0.5; stilbestrol, 0.05, and vitamin A, 0.1.

He also pointed out that experimental work indicates too much emphasis may be currently placed upon beef marbling as a criterion for grading quality.

He explained, "Three groups of comparable steers were placed on three feeding regimens when the average age was 12 months. One group was immediately placed in the feedlot and finished so that the average grade was high good to low choice. The second group was delayed

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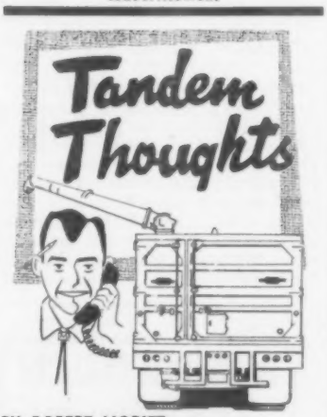

BY ROBERT MORITZ
WILSON TRAILER COMPANY

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For further information, write: Bob Moritz, Wilson Trailer Company, 2400 Leech Avenue, Sioux City, Iowa.

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PENNSYLVANIA ASSOCIATION OFFICERS—The Pennsylvania Millers and Feed Dealers Assn., at its 83rd annual meeting at Hershey, elected, left to right, F. Clay Erdley, Big Valley Feed & Grain, Belleville, second vice president; C. G. Pritts, Pritts Feed & Supply, Smithton, first vice president; L. D. Ritchey, Curry Supply Co., Curryville, retiring president; and Robert B. Graybill, Miller & Bushong, Rohrerstown, president. Not shown are William L. Jamieson, Robert Jamieson's Sons, Fredonia, third vice president; and John L. Zug, John L. Zug & Sons, Inc., Richland, treasurer.

a few months before reaching the feedlot, while the third was delayed still longer.

"All three lots were finished to essentially the same degree of fatness, as measured by external fat thickness over the loin area. Carcass measurements revealed a tendency toward higher grading carcasses and more marbling in the lean meat of the delayed-fed groups. Although the first group was less well marbled and graded poorer than the other two groups, it produced the tenderest beef, based on a shear test.

"This experimental work is being continued."

HANDLING FALL FEEDER CATTLE—Death losses in handling of fall feeder cattle are not great, but do cattle feeders account for other economic losses such as shrink and inefficient feed utilization?

"With low profit margins that confront the cattle feeder, efficiency in the feedlot is important," Dr. Gene Summers, extension animal husbandman, and Dr. John Herrick, extension veterinarian, said in reply to their own question. They said, "The prerequisites in cattle feeding should be aimed at practices that prevent losses rather than halt them after they occur."

The two men said that for one to three weeks after cattle arrive in the feedlot they need rest, feed, water and observation. They should not be sorted and handled immediately, it was emphasized.

During this observation period, the health and nutritional status of the animals should be determined. It was stated that if the cattle are sick or breaking with a disease, weight loss, death and medical treatment can be cut to a minimum by taking care of the problem immediately. It was pointed out that $1 spent on disease prevention can return as much as $5.

Dr. Summers said that there are a number of good feeding methods for bringing new cattle on feed. He said, "A general method to follow is to offer hay free choice, preferably containing at least one fourth legume. A mixture of half corn and half oats or a comparable grain mixture should be fed at the rate of ½ lb. for each 100 lb. of body weight. The grain may be provided the second day the cattle are on the farm. As soon as the cattle are consuming grain readily, it can be increased slowly with a corresponding decrease in roughage intake until they are on full feed. In addition to the hay and grain, the cattle should receive at least 1 lb. of a 28 to 40% supplement containing ample vitamin A to meet any shortage existing in the animals when they arrive at the farm. The vitamin A level should be between 20,000 and 30,000 I.U. per pound of supplement. If desired, antibiotics may be included at a level of 300 to 350 mg. per pound of supplement if this level is fed for no longer than three to four weeks. In addition, iodized salt and a complete mineral mixture should be supplied free choice."

FEEDING HIGH MOISTURE CORN TO BEEF CATTLE—The feeding of high moisture corn to beef cattle has several advantages in addition to a possible increased feeding value, Dr. Walter Woods, associate professor of animal husbandry, told persons attending the conference.

He pointed out that it can be harvested earlier with reduced field loss in picking, may be stored ready for feeding without further processing and is readily adapted to mechanized feeding systems, and eliminates the need for drying equipment.

A possible disadvantage, he said, is that when the grain is stored in the high moisture state it can only be used for livestock feed.

From the feed value standpoint, he said that high moisture ear corn has given gains in fattening cattle similar to cattle fed dry ground ear corn. The efficiency of gain favors high moisture ground ear corn when compared to dry ground ear corn or an equivalent moisture basis, he said, citing research at Iowa State, Purdue and Michigan State. In 14 experiments comparing high moisture ground ear corn with dry ground ear corn for fattening cattle, he noted that the average daily gain was similar for the cattle fed both kinds of corn, but that there was a slight advantage for the cattle fed the high moisture corn (3% stimulation in gain). He pointed out, "The cattle fed high moisture ground ear corn require 10% less feed to produce 100 lb. of gain than the cattle fed the dry ground ear corn on an equivalent moisture basis. The average moisture content for the high moisture corn was 36% as compared to 16% for the dry ground ear corn."

He cited results of an Iowa State test in which high moisture shelled corn (35% moisture) was compared to rolled dry shelled corn (14% moisture) for fattening steers and gains were similar for the two groups of steers.

He then commented on experimental work done at Michigan State in which high moisture shelled corn was compared to dry shelled corn. He said cattle fed high moisture shelled corn gained on the average 5% less, but that there was no difference in feed per 100 lb. of gain. The high moisture shelled corn contained 30% moisture as compared to 17% for the dry corn.

He said that an Illinois study showed that rolling or grinding of high moisture corn as it was removed from the silo decreased corn required per 100 lb. gain by 13.6 and 15.9%, respectively. He indicated that it is not known if rolling or grinding at the time of silo filling would give the same benefits. But, he said the optimum time could depend on when it is most convenient for the feeder to do the grinding.

Dr. Woods said, "High moisture ground ear or shelled corn should be supplemented for fattening cattle the same as regular ground ear or shelled corn. The difference in feeding value between high moisture ground ear corn and ground shelled corn appears to be similar to that between dry ground ear corn and ground shelled corn."

GRUB CONTROL IN FEEDER AND STOCK CATTLE—That development of the organic phosphorus insecticides for control of cattle grubs has eased labor and equipment problems and reduced stress on the cattle was the point made by Dr. Harold Gunderson, professor of entomology and wildlife, in his presentation.

These insecticides, the first of which was approved in 1958, can be administered as a feed additive or as boluses, sprays or dips, he pointed out.

Coccidiostat-Antibiotic Combinations Asked

WASHINGTON — The Food and Drug Administration announces that Dow Chemical Co. has proposed issuance of a food additive regulation providing for use of the coccidiostat zoalene at existing levels in combination with certain levels of chlortetracycline in chicken feed.

The chlortetracycline levels proposed in this latest petition for use with zoalene are 50 to 100 gm. per ton of feed for prevention of chronic respiratory disease (air sac infection) and hexamitiasis; 100 to 200 gm. per ton for treatment of CRD, infectious sinusitis, blue comb and hexamitiasis; 200 gm. per ton for control of synovitis.

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New Poultry Business System Explained

HARRISBURG, PA.—A new poultry business system which calculates egg production records and compares them with others in a 14 state area was explained at the Northeastern Poultry Producers Council Exposition in Harrisburg. Developed by NEPPCO, this is only the first phase of the previously announced program to deliver uniform, comparable business information to poultrymen.

Participating poultrymen will be provided with Pen Record forms on which they will fill in data on egg production, changes in flock inventory, and feed consumption. From the information on these forms, each poultryman will then be able to calculate his own production records.

However, to avoid this complicated arithmetic, all he need do is turn the completed forms over to his county agent. They will then be processed by electronic data processing equipment and returned to him, along with records of the production of all other participating poultrymen. (No names will be revealed along with the records, so each poultryman's record is his own secret.)

This information will enable every poultryman to compare his efficiency with other businesses in the 14-state NEPPCO area. It makes it easy for him to spot profit leaks, and gives him such comprehensive records that it helps in such functions as getting bank loans.

This system, developed by NEPPCO and the American Feed Manufacturers Assn., costs so little that any poultryman can participate. The Pen Record forms sell for 75¢ each ($1.50 complete with clip board) and are even less costly when ordered in quantity. Each form covers a four-week period.

Cost of the electronic data processing, to be performed each four-week period, is only $17.25 per year. This means that complete records for a pen may be obtained, along with a comparative analysis of performance against other poultry operations, for less than $35 a year; a price any poultryman can afford.

The new system establishes a laying period of 15 four-week segments (about 14 months) beginning with the 141st day of age. Those who wish to start the record earlier than 141 days, or extend it beyond the 60-week standard period will find that extra pages are provided with the Pen Record forms for this purpose.

The system was the brainchild of a committee comprised of NEPPCO's Dr. Alfred Van Wagenen and Harry C. Wheldon; AFMA's Oakley Ray and Alem B. Smith. The committee received the immediate support of many state extension services. Of particular help were Cornell's Jonathan Tobey; Rutgers' John Bezpa, and NEPPCO's Carroll Dunham, all of whom now sit on the governing board. In all, experts from 50 states participated in making the plans for this system.

Statement required by the Act of Aug. 24, 1912, as amended by the Acts of March 3, 1933, July 2, 1946, and June 11, 1960 (74 Stat. 208) showing the ownership, management and circulation of Feedstuffs, published weekly at Minneapolis, Minn., for Oct. 14, 1961. 1. The names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, The Miller Publishing Co., Minneapolis, Minn.; Editor, George L. Gates, Minneapolis, Minn.; Managing Editor, Roger S. Berglund, Minneapolis, Minn.; Business Manager, Wilfred E. Lingren, Minneapolis, Minn. 2. The owner is: The Miller Publishing Co., Minneapolis, Minn., principal stockholders of which are: Paul A. Anderson, Minneapolis, Minn.; Claudia I. Baum, Scottsdale, Ariz.; Walter O. Buchkosky, Minneapolis, Minn.; Paul L. Dittemore, Glenbrook, Conn.; First National Bank of Minneapolis as Trustee under agreement with The Miller Publishing Co. dated Dec. 29, 1955; George L. Gates, Minneapolis, Minn.; Thomas A. Griffin, Minneapolis, Minn.; Robert M. Harrison, LaGrange, Ill.; Milton B. Kihlstrum, Minneapolis, Minn.; Wilfred E. Lingren, Minneapolis, Minn.; Evelyn B. Martin, Floral Park, L. I., New York; Sara S. Michener, Minneapolis, Minn.; Donald G. Neth, Minneapolis, Minn.; H. J. Pattridge, Wayzata, Minn.; George W. Potts, Minneapolis, Minn.; Dorothy Beatty Pratt, Minneapolis, Minn.; Don E. Rogers, Chicago, Ill.; R. Dale Swenson, Minneapolis, Minn.; Carl R. Vetter, Minneapolis, Minn.; Mrs. Rebekah S. West, St. Louis, Mo. 3. The known bondholders, mortgagees, and other security holders owning or holding 1% or more of total amount of bonds, mortgages, or other securities are: None. 4. Paragraphs 2 and 3 include, in case where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner. 5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: 13,704. Wilfred E. Lingren, Business Manager. Sworn to and subscribed before me this 27th day of September, 1961. J. G. Pattridge, Notary Public, Hennepin County, Minn. My commission expires March 17, 1964. (Seal.)

Poultry-Citrus Feud May End in a Draw

ATLANTA—It looks as if the feud between Georgia poultry and Florida citrus may be ending in a draw.

Florida is still levying the wing-tag and inspection fee, and Georgia is procrastinating on a proposed retaliatory tax on citrus.

Georgia Gov. Ernest Vandiver said he will not begin collecting the 10¢ per container retaliatory tax until Agriculture Commissioner Phil Campbell wants it.

Mr. Campbell said two industry committees, one representing Georgia poultry and the other Florida citrus, are working to solve the problem and "until these committees admit failure I am requesting Gov. Vandiver to hold up the citrus tax."

Georgia poultrymen claim the wing-tagging and inspection fee on Georgia poultry sent into Florida is costing them a quarter of a million dollars a year.

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A dependable body building food, simple and economical to feed . . . assures a definite return on investment.

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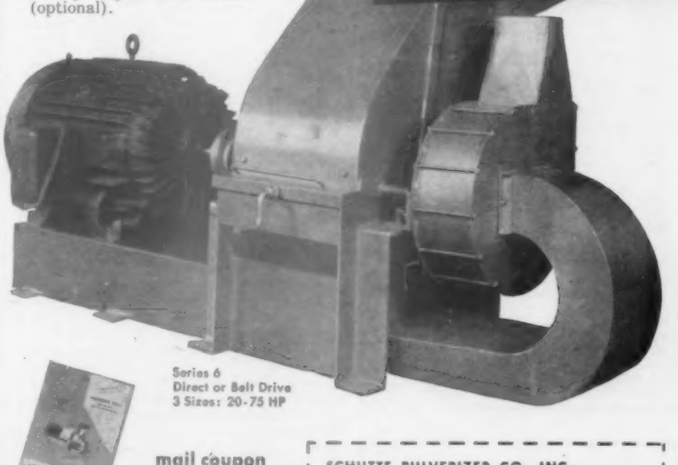

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Classified advertisements received by Tuesday each week will be inserted for the issue of the following Saturday. Rates: 25¢ per word; minimum charge $3.75. Situations wanted, 20¢ a word; $3.00 minimum. In figuring cost of your classified ad . . . each word, abbreviation, telephone exchange and number, set of initials, or group of figures counts as a word. To the number of words in your want ad itself add six (6) words for your name and address or name and address of your firm. This applies for both direct-reply ads and for blind ads containing a box number. If an ad is keyed, care of Feedstuffs, 25¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of $14.00 per column inch. No discount on ads ordered for more than one insertion.

All Want Ads cash with order.

MACHINERY FOR SALE

1959 DAFFIN, LIKE NEW, AIR UNLOADing, mounted on Chevrolet truck, $12,500. Melco Manufacturing Co., 4487 Delaware Ave., Des Moines, Iowa; Phone AM 6-6333.

FOR SALE—GADDIS BROTHERS 8-COMpartment trailer, drag bottom, air delivery, Wisconsin gasoline engine. Contact Sprout, Waldron & Co., Inc., Muncy, Pa.

ALMOST NEW UNION SPECIAL BAG sewing machine with top balancer, No. 80600P. Heterochemical Corp., Valley Stream, N. Y.

CHAMPION MOBILE GRINDER AND mixer mills. Champion Portable Mill Co., 2105 Como Ave. S.E., Minneapolis 14, Minn.

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FEED MIXER, 1-TON CAPACITY, GUARanteed first-class throughout, 5 H.P. motor drive. Address Ad No. 3479, Feedstuffs, Minneapolis 40, Minn.

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WHIRLAWAY AIRBLAST CAR LOADERS, flour, feed and grain machinery. One of the oldest and largest experienced equipment houses. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

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SPROUT - WALDRON MODEL 500-B Junior Ace pellet mill complete; stainless-steel feeder conditioner, feeder drive, one pair rolls, die. Mill purchased for pelleting experiments on chemical product. Operated approximately 1,000 hours. Price: Approximately 80% of purchase price. Reichhold Chemicals, Inc., Box 3547, Seattle, Wash.; Attention: Palmer.

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1956 AND '57 DAFFIN FEED UNITS, BOTH on 1959 GMC trucks. Harry Martin, Jr., R.R. No. 2, Olney, Ill.

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WANTED TO BUY—GOOD, USED PORTAable scales for weighing cattle. Drs. Shey and Cotton, Algona, Iowa.

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BAG CLOSING SEWING MACHINES AND equipment. Any type—condition. McCullough & Co., 8205 Paradise Lane, Kansas City 34, Mo.; SO 1-2857.

WANTED TO BUY — RICHARDSON scales, bag closing machines, other good flour, feed and grain machinery. Complete plants bought and sold. Appraisals. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

WANTED TO BUY GOOD USED ALFALFA dehydrating drum and related equipment. Good used 36 inch hay mill. Write or call Warren Easland, J. W. Easland & Sons Co., Gaylord, Minn.; Belmont 72496, Belmont 72237.

SITUATIONS WANTED

POULTRY GRADUATE—12 YEARS' EXperience in service, supervision, feed sales and integration programs. Will send complete resumé to interested persons. J. W. Thompson, 1729 Grace, Arlington, Texas.

PRODUCTION SUPERINTENDENT — Broad experience in plant operation, cost and maintenance. Interested in small or large operation. Also will consider future openings. Age 38. Will relocate. Address Ad No. 7320, Feedstuffs, Minneapolis 40, Minn.

EXPERIENCED POULTRY NUTRITIONist—Young Ph.D., effective in written communication and possessing training in biochemistry, desires position with interest and challenge (preferably involving some research). Willing to relocate. Include salary range in first letter. Address Ad No. 7327, Feedstuffs, Minneapolis 40, Minn.

HELP WANTED

MANAGER WANTED — FOR WELL EStablished Michigan country elevator. An annual grain and farm supply volume of $750,000. Must be experienced. Salary plus incentive and fringe benefits. Address Ad No. 7321, Feedstuffs, Minneapolis 40, Minn.

FIELD REPRESENTATIVE WANTED FOR service and sales to Midwest farmers. Trading and/or experience in livestock and poultry feeding and management necessary. Successful sales experience in feed or other agricultural products preferred. Position offers good salary, commission, company benefits. Address Ad No. 7328, Feedstuffs, Minneapolis 40, Minn.

SALESMEN WANTED

We are seeking salesmen for New England and Middle Atlantic States. This position requires traveling with a car and expenses are provided. We are forming a new sales organization. We are a large and long-established National Manufacturer of feed ingredients. The men we are looking for should have sales experience calling on feed manufacturers. Compensation is salary and expenses. All replies are strictly confidential.

Address Ad No. 7191, Feedstuffs Minneapolis 40, Minn.

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POPULARITY OF OUR MEDICATIONS for poultry and livestock growing fast. If you are a distributor or manufacturers' representative wanting new opportunity, or a qualified service salesman, write: Naremco, Box 1572, S.S.S., Springfield, Mo.

FOR RENT—WOODSTOCK, ILLINOIS. Established feed and grain elevator. All modern equipment. Well stocked. Large bulk and bag storage areas. Railway siding. Ideally located in grain producing area. Financing or partnership available to responsible party. Contact: Carol Franks, Marengo, Ill.; Jordan 8-8581.

FEED MILL FOR SALE—NORTHEASTERN Wisconsin location. Good dairy, poultry and hog country. Well-equipped and in sound condition. Volume of $300,000 at retail each year for last eight years. Profits after salaries close to $25,000 each year. Selling because of lack of family interest. Price $75,000 plus inventory. Terms, 30% down and balance on land contract to reliable party. Operating statements available. Write in confidence to Ad No. 7317, Feedstuffs, Minneapolis 40, Minn.

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Government Surplus
BOLTED STEEL GRAIN TANKS

Diameter	Capacity per ft. of height	Maximum height
38 ft.	992 bu.	66 ft.
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Also furnished with 13' x 10' doorways for warehouses. Present location—Lima, Ohio. Standard steel sections erected anywhere at substantial saving.

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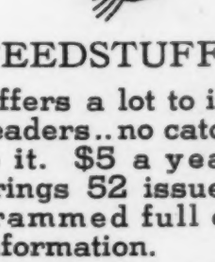

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We are looking for a presently successful district manager who feels he has gone as far as he can go with his present organization. We want a man who knows how to sell feed and who can impart this knowledge to salesmen he hires. He must be able to hire men and direct activities in the area assigned to him.

This man we are looking for will be located in a hot sales area of northern Illinois. We offer salary, expenses, override, group hospitalization and insurance, profit sharing plan and a chance to grow with a well established but rapidly expanding company. The man selected must be between 30 and 53 years of age.

For further information, write Box 7322, Feedstuffs, Minneapolis 40, Minn.

Edward J. Botto

D. H. Van Pelt

D. E. Horn Announces New Dairy Program

YORK, PA. — D. E. Horn & Co., Inc., has announced a new dairy program and the appointment of two dairy specialists to that department.

Merchandising of the new program is expected to start in the near future, the firm indicated.

Named to the positions in the dairy department were: D. H. Van Pelt, in charge of dairy formulations and program consultations, and Edward J. Botto, manager of the dairy department.

"Because of the company's desire to continue growing and reach new heights in its poultry tonnage, a completely new dairy sales force will be added in the future to handle the new dairy department," the company announcement said.

Mr. Van Pelt received his advanced education at Iowa State University and worked for many years in the feed industry. The company's announcement said that Mr. Van Pelt is responsible for pioneering many new approaches in the feeding of dairy cattle.

Mr. Botto, the announcement continued, will be responsible for coordinating all activities associated with the new program. The firm says that Mr. Botto will spend considerable time offering service and feeding advice to Hornco customers. Mr. Botto is a graduate of LaSalle College, Philadelphia, and has been associated with the dairy industry through his working career. The company announcement said that Mr. Botto was "one of the first men to develop and pioneer artificial breeding of dairy cattle." He was for six years associated with a major feed company, the announcement said.

Suggestions on Vitamin A Given

URBANA, ILL.—University of Illinois animal scientists recommend that high grain rations of stored or high moisture corn for beef cattle be supplemented with 20,000 to 30,000 units of vitamin A, either as preformed vitamin A or as carotene in hay or alfalfa meal.

This was what members of the Illinois Society of Professional Farm Managers and Rural Appraisers were told when they visited the university. They were filled in on Illinois research on the vitamin A problem, including the effects of nitrate in the ration.

The scientists also recommended that cattle on high silage rations receive a supplement of at least 10,000 I.U. of vitamin A per head per day as preformed or true vitamin A, since carotene may not be used efficiently in such rations.

In addition to possible problems because of nitrate content when some silages are fed, the group was told that the need for supplemental vitamin A may be even greater when cattle are moved to high corn rations after silage feeding.

Steers moved to a full feed of corn and hay in April and May after wintering on corn silage failed to build up stores of vitamin A in their livers even when the rations were supplemented with 8,000 units daily from April through June and 32,000 units daily in July and August.

Feeders also were cautioned on use of corn more than a year old. Such corn is often low in carotene.

GAINESVILLE POULTRY EXCHANGE INSTALLS BUYER PHONE SYSTEM—At the Gainesville (Ga.) Poultry Exchange (see first photo), where a new electronic-telephonic circuit has been set up for buyers in two states, Alabama and Georgia, an auctioneer sits at a desk chanting into a microphone. Buyers no longer have to appear in person at the exchange.

An hour before the market opens, a "briefing" is made to all the members of the exchange via the telephonic circuit (second photo). They are posted as to what will be offered, weights and condition as well as location. A young lady also records sales during the auction using the equipment shown above. The console contains a light signal for every subscriber.

As shown in the third photo, a loudspeaker hookup with the telephonic circuit permits these men to listen to an auctioneer of the Georgia Poultry Exchange at Gainesville selling broilers. The auctioneer's voice is reaching 30 points in Alabama and Georgia. It is no longer necessary for buyers to leave their offices to attend the daily sales at Gainesville. When they want to buy they press a button on their telephone and place a bid which is instantly recorded by the auctioneer.

Bid by Phone at Georgia Exchange

By ROBERT H. BROWN
Feedstuffs Special Correspondent

GAINESVILLE, GA.—In a small office in a section of the building occupied by the Georgia Poultry Exchange, an auctioneer sits down daily with a set of earphones over his head and begins his chant, which is transmitted over telephone lines to buyers in Georgia and Alabama.

No longer is it necessary for buyers or their respresentatives to appear in person at the exchange as the daily auctions start. The buyer can sit in the comfort of his own office and decide whether he wants to make a bid or not.

It is all part of a fancy telephonic and electronic bidding system installed at the exchange to help speed up the sale of birds, and to not only make it more convenient for buyers, but possibly save them some expense money.

Loudspeakers have been installed in the offices of buyers and sellers who are subscribing to the exchange facilities. This means the buyer can go about his daily routine and at the same time listen to the market quotations. He does not have to hold a telephone to his ear.

In Gainesville, the auctioneer speaks into a microphone. When a prospective buyer is ready to bid, he punches a button on his telephone and a corresponding number lights up on a console in front of the auctioneer. His bid is then taken by the auctioneer who repeats it into the microphone connected with the circuit.

Connected to the circuit are buyers in Athens, Winder, Commerce, Marietta, Atlanta, Carrollton, Cumming and Heflin, Ala., as well as subscribers in Gainesville.

Daily Routine

Each day before the auction gets started, subscribers are called by an employee of the exchange and posted on what is to be offered, the condition of the birds, location and who is offering them. This happens one hour before the auction starts. It gives buyers time to examine their needs and be ready for action when the auctioneer comes on the circuit.

Telephone company officials point out that the auctioneer is in complete communication with each of the 30 processors and buyers subscribing to the service.

The Georgia Poultry Exchange started operations about two years ago to provide a central buying and selling point for processors. Desks were provided in the exchange for representatives to work during the sale.

With the new equipment, it will not be necessary for a personal appearance to be made, officials said.

"The convenience of the telephone bidding system will save time and travel for processors who previously had to come to the auction each day to purchase any poultry," said Ray Fechtel, president of the exchange.

Tennessee Feed Convention Planned

MEMPHIS, TENN.—Plans are taking shape for the 12th annual convention of the Tennessee Feed Manufacturers Assn., to be held Nov. 17-18 at the Holiday Inn of America in Memphis.

Among the speakers will be Bob Diercks, vice president, grain division, Cargill, Inc., Minneapolis, who will discuss "Dynamic Trends in Agriculture"; Charles Klinger, product coordinator, Central Soya, Inc., Ft. Wayne, Ind., on "Feed Labeling"; W. E. Glennon, president of the American Feed Manufacturers Assn., Chicago, "Road Maps Are Not Free"; Lee Boyd, director, feed control and nutrition, AFMA, "Manufacturers' Relationship with Food and Drug Administration," and Dr. W. D. Bishop, leader of agricultural programs, University of Tennessee Extension Service, Knoxville, "Centennial Celebration of the Land-Grant College System."

Following business sessions in the afternoon of Nov. 17, those attending will gather at the Chickasaw Country Club for a social evening. Activity on Saturday will include a breakfast for officers and directors and an afternoon football game between Tennessee and Ole Miss.

Nutrition Group to Tour Laboratories

ST. PAUL—A tour of University of Minnesota research facilities related to animal agriculture is scheduled for the first Twin City Nutrition Seminar of the 1961-62 season Oct. 17.

The seminar group will meet at Peters Hall on the St. Paul campus of the University of Minnesota at 7:30 p.m., according to Don Swanson, Blomfield-Swanson, secretary of the group.

Included in the tour will be: New diagnostic laboratories, new isolation facilities, poultry, animal and dairy husbandry laboratories, miniature silos and silo gas laboratories.

Dr. Jay Meiske, assistant professor, animal husbandry, University of Minnesota, is program chairman.

25,000 Chickens Burn

ALBEMARLE, N.C. — Fire swept through two houses of Lowder Farms, Inc., near Richfield, N.C., destroying 25,000 chickens.

A new building, 600 feet long and 50 feet wide, containing 10,000 day-old chicks was destroyed. Half of a similar building with 15,000 half grown pullets also burned.

Eight rural volunteer fire departments saved other buildings on the egg producing farm.

Montana Flour Mills Has Annual Elections

GREAT FALLS, MONT. — Members of the board of directors and officers of Montana Flour Mills Co. here were all reelected at the 51st annual meeting of shareholders.

Directors last year chosen for another year are R. J. Anderson, J. C. Berky, W. H. Bertsche, Jr., E. F. Galt, Newell Gough, Jr., H. M. Hamilton, N. J. Holter, A. W. Johnson, C. G. McClave, J. D. Stephenson, and L. E. Taylor.

Officers reelected at the annual directors' meeting, which followed the shareholders' meeting, are Mr. McClave, president and general manager; Mr. Berky, first vice president and assistant general manager; Harry Wallace, treasurer; C. H. Wright, secretary; H. C. Johnson, vice president in charge of the formula feed division and assistant treasurer; E. M. Murphy, vice president in charge of flour sales and assistant secretary; W. V. Gannon, vice president in charge of production, and R. F. Morrison, vice president in charge of the Montana Elevator division.

At the shareholders' meeting, 91.29% of the total number of shares of common stock outstanding were represented in person or by proxy.

QUIET VIBRATOR

CUTS OPERATING NOISE

Vibrator noise is sometimes objectionable, especially when vibrators are used in close proximity to personnel for extended periods.

The Cleveland Vibrator Company offers two types of vibrators to solve this problem. They are the RC and the AC vibrators.

The RC's are electric and operate on a rotating eccentric weight principle. They are an enclosed electric motor with rotating, cam-like weights on each end. The RC's make no more noise than a standard motor.

The AC's are similar to standard Cleveland Vibrators, except that the piston stroke is cushioned by a pocket of air. While noise is not eliminated, it is reduced to an unobjectionable level.

For complete catalogs and prices, write to

THE CLEVELAND VIBRATOR CO.
2793-10 Clinton Ave., Cleveland 13, Ohio

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR FOOTED ANIMALS

FOR ALL APPLICATIONS

PAXCO DEHYDRATED CORN COB MEAL is available in six grinds—from the coarsest to the finest — for all feed applications—roughage, pellets and as a carrier for molasses and feed additives. Write today to:

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Freight Paid on 200 Lbs. and Over
16 lb. to 19 lb. Ave. Friction Pull; 2,500 lb. to 3,000 lb. Ave. Cover Tensile

Width	Ply	Oz. Duck	Covers	Price
7"	4	32	1/32"x1/32"	$1.71 Ft.
9"	5	32	1/32"x1/32"	2.44 Ft.
12"	3	28	1/16"x1/32"	2.31 Ft.
12"	6	36	1/16"x1/16"	4.02 Ft.
16"	3	28	1/16"x1/32"	3.09 Ft.

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Names in the News

STERWIN CHEMICALS NAMES DIRECTOR OF NEW POULTRY HEALTH CENTER—Dr. T. O. McMillan has been appointed laboratory director of the new laboratory and poultry health center recently opened in Springdale, Ark., by Sterwin Chemicals, Inc., New York, it was announced by L. R. Patton, manager of Sterwin's animal health division. Dr. McMillan has been associated with Sterwin since 1959 as a veterinary service specialist, with headquarters in St. Louis. His new appointment is designed to expand the animal health division's service to the poultry and feed trades in Arkansas, Missouri and Oklahoma. Affiliated with the division are Dorn & Mitchell Laboratories, Opelika, Ala., and Delaware Poultry Laboratories, Millsboro, Delaware.

Dr. T. O. McMillan

The division's principal products are Trithiadol and CocciVac for the treatment of coccidiosis, and the D.P.L. line of poultry vaccines and medicinals.

Dr. McMillan received his D.V.M. degree from Texas A&M College. Before joining Sterwin, he had engaged in the private practice of veterinary medicine.

ARTHUR R. HILL, INC., APPOINTED SALES AGENT FOR CDP & DIKAL—Arthur R. Hill, Inc., Seattle, Wash, supplier of feed ingredients, has been appointed northwest sales agent for Smith-Douglass CDP (defluorinated phosphate) and DIKAL (dicalcium phosphate), Smith-Douglass feed phosphorus sales manager Henry Highton has announced.

Arthur R. Hill, Inc., will sell CDP and DIKAL in Washington and Oregon. Arthur R. Hill, president, announced that the products will be delivered in the area by rail.

Arthur R. Hill, Inc., was formed in January, 1960, as the successor to the 60-year-old Henry D. Gee Co. The Hill firm serves the industry with feed ingredients. With Arthur R. Hill in the company is C. G. Buckton, who was associated 15 years with the predecessor, the Gee company.

Arthur R. Hill

Donald W. Hansen

DONALD W. HANSEN NAMED TO INTERNATIONAL MINERALS & CHEMICAL CORP. POST—Donald W. Hansen has been named sales promotion manager of the feed ingredients department of International Minerals & Chemical Corp., Skokie, Ill.

He will have responsibility for training sales agents and their personnel, as well as for sales coverage and product promotion in a new program of service to feed industry sales agents, according to John K. Westberg, sales manager.

Mr. Hansen, who has had 14 years in sales and sales management posts in the feed and seed industries, comes to IMC from L. Teweles Seed Co., Milwaukee. Prior to that he was sales manager for Hubbard Milling Co., Mankato, Minn.

He is a 1941 graduate of the University of North Dakota.

S. L. MYERS APPOINTED HIGHWAY EQUIPMENT CO. VICE PRESIDENT—Appointment of S. L. Myers as vice president of Highway Equipment Co., Cedar Rapids, Iowa, was announced by C. H. Jordan, president. He will assist the executive vice president in general administrative responsibilities of the company, and will continue to direct export activities in the capacity of export manager.

He began his career in 1923 with a heavy equipment manufacturing company and joined Highway Equipment Co. as manager, export sales, in 1961.

S. L. Myers

John Adams

JOHN ADAMS RETIRES FROM GRAIN INSPECTION SERVICE—John Quincy Adams, Chicago, member of the board of appeals of the U.S. Department of Agriculture's grain inspection service, final authority on grain grades and grade interpretations, has retired after 43 years service with USDA.

Mr. Adams joined USDA in 1918 as a grain sampler and served in Cairo, Ill., and Minneapolis before becoming a member of the board of grain supervisors in 1954.

LEE GIRVEN APPOINTED SECRETARY, LOS ANGELES GRAIN EXCHANGE—Lee Girven has been appointed secretary of the Los Angeles Grain Exchange, according to Lawrence D. Elfelt, president. Mr. Girven has been associated with the grain and feed industry in southern California for over 22 years and with Spencer Kellogg & Sons, Buffalo, for over 30 years as district sales manager of its Long Beach plant. Mr. Girven will be the seventh man to serve the exchange as secretary. He succeeds Gabriel Bass, who resigned in June.

Dr. E. C. Elting

Dr. G. B. Garner

Dr. George K. Davis

Dr. C. A. Elvehjem

CENTENNIAL NUTRITION CONFERENCE—Four authorities who will speak on a variety of subjects at the Oct. 23-25 Centennial Nutrition Conference at Kansas City are pictured here. Dr. Elting, deputy administrator for experiment stations, USDA, Washington, will speak on the role of agricultural research in our national economy; Dr. Garner, University of Missouri, will speak on anti-metabolites in animal nutrition; Dr. Elvehjem, president, University of Wisconsin, asks, "Where Do We Go from Here?", in his speech; and Dr. Davis, University of Florida, speaks on radiation, fallout, feeds and foods. Under the sponsorship of the Midwest Feed Manufacturers Assn., the conference will have over 25 speakers, several papers will be presented and there will be exhibits.

PAPER SHIPPING SACK MANUFACTURERS' ASSN., INC., ELECTS OFFICERS—Bernard W. Recknagel, vice president, St. Regis Paper Co., was elected president, and F. Gregg Bemis, chairman, Bemis Bro. Bag Co., was elected vice president of the Paper Shipping Sack Manufacturers' Assn., Inc., at its 28th annual meeting at White Sulphur Springs, W.Va.

Elected to the board of directors were: Mr. Bemis; T. W. Brown, Jr., Owens-Illinois; J. R. Clements, Raymond Bag Corp., division of Albemarle Paper Mfg. Co.; H. Holden, Kraft Bag division, St. Marys Kraft Corp.; W. L. Jennings, West Virginia Pulp & Paper Co.; E. K. Ludington, Jr., Chase Bag Co.; G. D. Morgan, Jr., Seaboard Bag Corp.; H. M. Recher, Union Bag-Camp Paper Corp.; Mr. Recknagel, and A. A. Scholl, International Paper Co., Bagpak division. Frank Pocta was reelected executive secretary and treasurer.

CARGILL NAMES LLOYD NELSON PORTLAND MANAGER—Lloyd Nelson has been named manager of the Portland office of Cargill, Inc.'s grain division, Walter B. Saunders, vice president of the grain handling firm headquartered in Minneapolis, announced. Mr. Nelson succeeds John Sarsfield who has retired.

Mr. Nelson joined Cargill in 1934 at Carbury, N.D. He was transferred to the Portland office in 1954 from Great Falls, Mont., where he managed the Cargill branch office. He is a native of Litchfield, Minn., and an alumnus of the University of Minnesota and the University of North Dakota.

HARVEY JAUNICH TO HEAD BUNGE CHICAGO OFFICE—Harvey Jaunich has been selected to head the new Chicago office of Bunge Corp., exporter of agricultural commodities, with headquarters in New York. Announcement of the appointment and the opening of the Chicago office was made by Walter Klein, president.

Mr. Jaunich, a native of Minnesota, joined Bunge late last year after several years experience with Harris-Upham. He is a member of the Chicago Board of Trade and will represent Bunge Corp. in the Chicago market.

LARRY G. SAYLOR JOINS ANIMAL HEALTH INSTITUTE STAFF—Larry G. Saylor will join the staff of the Animal Health Institute, Des Moines, Iowa, as assistant to the executive secretary effective Oct. 15, according to James E. McCabe, president.

A native of Iowa, Mr. Saylor majored in poultry husbandry at Iowa State University and in business administration at Drake University. A former employee of the Farmers Grain Dealers Association of Iowa, he has been in partnership with his father in the Larry Saylor Co. in distribution of poultry equipment and allied products.

Mr. Saylor replaces Frank Dotseth, who will do post graduate work at the State University of Iowa.

WALLIN D. BYNELL NAMED DOUGHBOY GRAIN MANAGER—Wallin D. Bynell, Minneapolis, has been named general manager of the grain division of Doughboy Industries, according to Edwin J. Cashman, president, New Richmond, Wis.

Wallin D. Bynell

Mr. Bynell has had more than 25 years experience in the grain and feed business and was formerly vice president and general manager of Peavey Feed Mills, Minneapolis. Mr. Bynell, who will represent Doughboy Industries on the trading floor of the Minneapolis Grain Exchange, succeeds the late Irwin M. Solum, who died last month.

He began his career in the grain business in 1934 and between that date and 1961, held key positions in F. H. Peavey & Co. He attended the University of Minnesota.

NEW POULTRY PRODUCTS REVEALED

HARRISBURG, PA.—A new egg container that keeps eggs fresh three weeks or more without refrigeration; frozen French Toast that is "cooked" in an ordinary electric toaster; a chicken barbecue sauce packed in a pressure can and applied like pressurized whipped cream—these are only a few of the new products revealed at a meeting of representatives from industry and colleges in Harrisburg, Pa.

Under the chairmanship of Dr. Philip Stiles, University of Connecticut, the men formed a standing committee to help coordinate the food product research and development activities of colleges and industries. The committee will try to reduce duplication of effort in this field. It will also seek ways to get new products out of the lab and onto grocery store shelves.

The need for this work was proved by events at the meeting. A meat packer mentioned that his firm's turkey roll falls apart. His problem was solved by a university research man who had discovered the answer in his laboratory long before.

The committee was formed at the Northeastern Poultry Producers Council Exposition.

Arkansas Cattlemen Plan Feedlot

NORTH LITTLE ROCK, ARK.—The Arkansas Cattlemen's Assn. plans to establish a cooperative feedlot here, according to the association newsletter.

Under the plan, association members will be invited to consign from five to 20 calves each to the lot. The animals are scheduled to go on feed about Nov. 1.

A local feed firm will mix and deliver the feed at cost plus $5 per ton for the mixing and delivery, the newsletter said. Rations are to be formulated on advice of the University of Arkansas College of Agriculture and the extension service.

The calves will be weighed in, tagged and branded, and their market values will be set at the time they are consigned. Complete records will be kept on each calf, and at the end of the feeding period, the animals will be slaughtered and the carcass data posted, the association said.

Officials said the producer will retain ownership of his cattle during the test. He will pay feed costs and a yardage fee.

CENTENNIAL

(Continued from page 1)

niversary of the land-grant educational institution principle. The nutrition event is an integral part of a once-in-a-hundred-years national program to build public understanding of the land-grant college and university movement and to assess and evaluate the purposes and accomplishments of land-grant institutions. Coordination of the national program is being handled by the American Association of Land-Grant Colleges and State Universities, Washington, D.C.

Registration Still Open

Registration for the conference is still open, but the Midwest Feed Manufacturers Assn. suggested that hotel room reservations be made by wire or phone to the association's office, 20 West 9th St. Building, Kansas City. The registration fee includes a copy of the conference's proceedings, which will be assembled in a hard-cover, 296-page book, "A Century of Nutrition Progress."

The conference—the culmination of more than a year's planning by a committee of college and industry representatives headed by Dr. Harold Wilcke, vice president in charge of research, Ralston Purina Co.—will be preceded the evening of Oct. 22 with a dinner honoring the winners of an eight-state "Careers in Agriculture" essay contest in which college agriculture students have participated. First prize will be $300.

The conference program will present talks on topics of vital nutritional interest by speakers who are rated among the best in their respective fields.

Interest to Veterinarians

A portion of the program, Monday evening, Oct. 23, will be devoted to subjects of particular interest to veterinarians. It was suggested that some veterinarians may choose to attend only this portion of the conference.

The concluding session set for the morning of Oct. 25 will be concerned primarily with human nutrition; talks will be of special interest to home economists, dietitians and physicians.

The Centennial luncheon Oct. 25, which will conclude the conference, will be addressed by Dr. C. A. Elvehjem, president, University of Wisconsin. His challenge to the gathering will be "Where Do We Go from Here?"

Other sessions of the conference will concern many specific facets of animal nutrition.

Also, educational displays will be set up for viewing during the conference.

H. E. Crouther, acting director of the Fish and Wildlife Service, which will have a display at the conference, complimented the Midwest Feed Manufacturers Assn. on organizing a program "calculated to stimulate and exchange ideas and develop a closer working relationship between government and industry nutritionists and administrators. Such cooperative endeavors can certainly go a long way toward improving the nutritional well-being of our citizens and of our neighbors throughout the world."

Land-Grant Origin

The term "land-grant colleges" designates a group of 68 institutions of higher learning in the U.S. which were founded or substantially developed during the latter half of the 19th century by an act of Congress.

Under terms of the act, each state received a grant of federal land apportioned on the basis of 30,000 acres for each member of Congress. The income from the sale of the land was intended to provide an endowment fund for the continuing support of the colleges.

The nation's land-grant institutions now enroll approximately 20% of the country's college population.

WHITE HOUSE ASKED TO SERVE TURKEY

MINNEAPOLIS—The wife of the president of the Minnesota Turkey Growers Assn. this week asked the wife of the President of the U.S. to aid in the liquidation of the nation's turkey surplus.

Mrs. Stanley Schewe, Sleepy Eye, Minn., stating that "every budget-conscious housewife in the nation would be interested in the present low price of gobblers," wired Mrs. John F. Kennedy, asking that she serve turkey in the White House at least once during the next week or two.

Said Mrs. Schewe, "If American housewives will serve turkey just once before the end of this month, the surplus will be liquidated, and the turkey industry will be back on a sound basis."

SURVEY

(Continued from page 4)

lation was indicated in the spot survey:

" . . . Government control has cost us some of our freedoms, we can't afford to lose any more of them.

" . . . The things which have made this country great have been involved with the opportunity afforded those individuals with the guts to expand or reduce their business on their own decision, not someone else's.

" . . . Quotas would curtail planned expansion and growth of new grower struggling to improve his livelihood.

" . . . I sure wouldn't like to see happen to the turkey industry what has happened to other parts of agriculture.

" . . . No one has yet found an improvement on 'Supply and Demand'.

" . . . Most government programs are costly and help only the large operators. Our area is an ideal location for expansion and should not be restricted, but allowed to adjust without government interference.

" . . . Frequent inequities are inherent in our free enterprise system. I'd rather be free and allowed to make my own decisions.

" . . . Too many factors involved for government to properly control.

" . . . Controls should be directed at financing. Money raises turkeys. I don't think the hatcheryman, processor or egg producer governs the number of turkeys raised. Feed may represent 85% of the live price of turkeys in 1961.

" . . . Government controls have usually failed dismally to increase profits for growers or producers of any commodity.

" . . . It has never worked with or for a single other commodity. Why should we be naive enough to hope turkeys will prove the exception?

" . . . The industry has to take the incentive. There are enough poultry organizations to start a program of self-regulation and education.

" . . . I believe the turkey people can and will produce the proper number that can be marketed without government help."

A survey respondent who favored a government program regulating the numbers of turkeys to be marketed in 1962 said: " . . . If the people in the capacity of promoting and financing the size of our turkey crop do not use better judgment in the future than in the past, we are apt to wind up like the broiler business."

The survey also indicated that many representatives of the turkey industry did not understand the meaning of the 1961 Marketing Agreements Act which includes provisions for turkeys and turkey hatching eggs.

Twenty of the survey's 59 respondents said they had read the act; 39 said they had not. Twelve said they did understand what the act meant; 47 said they did not.

PREDICTIONS

(Continued from page 1)

balance of 1961 remaining near record lows; little prospect for improvement in turkey price or income.

Here's how the economists see things shaping up:

Feed and Grain—Corn prices at harvest for the 1961 crop are expected to average 90¢ to $1 bu. on a No. 2 basis. The Indiana farm price of corn probably will rise next summer to around $1.10-$1.20 in the corn surplus areas. In corn deficit areas the price will be 10-20¢ bu. higher. Modest profits may be expected from storage operations.

Prices of oats and barley will average slightly above the loan rate (62¢ and 93¢, respectively), while grain sorghum prices will average slightly below the loan ($1.93 cwt.).

Protein feed prices are likely to average 5-15% below last year's levels.

Soybean prices are expected to average above the loan rate of $2.30 bu., but considerably below last year.

Hogs—With increased marketings in prospect, hog prices are expected to average $1 to $3 lower than the $17.74 (all barrows and gilts at Indianapolis) for the 1960-61 marketing year. Larger marketings will result mostly from increased farrowings. The Indiana hog-corn ratio is expected to remain above the long-time average of 13.7 to 1 until mid-1962. Some liquidation of breeding herds may take place in late 1962 or early 1963.

Beef Cattle—Cattle numbers are expected to continue their upward cyclical trend during the coming year with resulting larger marketings and price declines. Fat cattle prices will average a little lower, with strongest prices for the year during the winter or spring. Beef herd operators can expect somewhat lower prices for feeder cattle and lower profits from the beef breeding enterprise in the next few years.

Dairy—Net income to dairymen will be up 1-4% in 1962. Milk prices will be steady to slightly higher. Individual producers will have to continue to increase volume and efficiency if they are to share in the increased income. No significant change is expected in support levels for dairy products in the year ahead.

Eggs—Returns from laying flocks are expected to be substantially less favorable as a result of higher feed costs and lower egg prices. The trend toward large commercial producing units will continue. It will be extremely difficult to make "hired man's" wages for the hours spent in caring for a small farm flock.

Broilers—Broiler prices for much of the remainder of 1961 will remain near their recent record low levels. A cutback in supply is expected to improve price levels during the first part of 1962. Any substantial price improvement will probably trigger a return to expanding rates of production.

Turkeys—Only a slight seasonal price increase is expected for the current record-sized turkey crop. For 1962, turkey production is likely to be as high or higher than in 1961 with little prospect for improvement in price or income.

UNCLE JOHNNY

(Continued from page 1)

at improving service, are under way.

Among the improvements are the addition of six delivery trucks to the company's fleet and construction of a new tile building to maintain and house the company's 40 pieces of rolling stock, installation of facilities providing service on bulk molasses feed and expansion and modernization of office space. There are also plans to provide an additional crew of men to speed loading and unloading of trucks.

PRICES

(Continued from page 4)

stronger during the week. In Minnesota, for instance, the price for young hens went up ½¢ lb. to 16-16½¢ and a ½¢ gain moved young tom prices up to 14-14½¢.

Eggs: Egg prices in major consuming centers were mixed. Small egg prices were sharply higher, up to 3¢ over a week earlier, while prices for large whites ranged from unchanged in the Northwest to ½¢ lower in the Midwest.

Eshelman Agrees to Foreign Manufacture

LANCASTER, PA. — John W. Eshelman & Sons has signed agreements for the manufacture of the Red Rose brand of feeds in Venezuela.

Under the agreement, Sindicato de la Leche, S.A., the largest association of cattlemen and milk producers in Venezuela, will manufacture the feeds from products raised in Venezuela using Eshelman components and formulas. The feeds will be marketed under the Red Rose brand.

J. Bezera, director manager of the Sindicato, present for the contract signing, said the move was one of "cooperation" whereby Eshelman furnished the "know-how" and his association and the Venezuelan people benefited by increased nutrition and the added use of Venezuelan crops.

This is the first time Red Rose feeds will be produced in a foreign nation. Eshelman at present exports to 38 countries from plants in the U.S.

PFIZER ACQUIRES GLOBE—On hand at the official signing of agreements between Chas. Pfizer & Co., Inc., New York, and Globe Laboratories, Inc., Fort Worth, in which Pfizer acquired the assets and properties of Globe were, left to right, Dr. Frank B. Jones, Globe president; J. J. Thompson, vice president of Pfizer and general manager of its agricultural division; Joe B. Hogsett, chairman of the board of Globe; John E. McKeen, Pfizer president; and Allen C. Calkins, newly appointed general manager of Globe Laboratories. Until his recent appointment, Mr. Calkins had served as eastern regional manager of the Pfizer agricultural division. The transaction was approved recently by Globe stockholders, and the official signing of agreements was at a meeting in Fort Worth.

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

ALFALFA MEAL

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $47@53, up $3.

Chicago: Demand good; trend $2@4 up; supply light; dehydrated, 17% protein, 100,000 units vitamin A $48.10 this week and $2 premium for next week.

Boston: Demand improved; trend steadier; supply adequate; dehydrated, 17% $53.50, up $2.50; suncured, 13% $48, sacked, unchanged.

Memphis: Demand fair; trend steady to higher; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $51, up $5; reground pellets $49.60, unchanged.

Portland: Demand fair; trend steady; supply adequate for dehydrated, tight for suncured; 15% suncured $41, 20% dehydrated pellet meal $49, both sacked.

Kansas City: Demand fair; trend steady to stronger; supply ample; 17% dehydrated alfalfa, 100,000 A pellets $42@44, reground pellets $43@45; 18% dehydrated alfalfa, 125,000 A pellets $43@47, reground pellets $44@48; 20% dehydrated alfalfa, 150,000 A pellets $48@52, reground pellets $50@53; all unchanged but $2 advance expected early next week.

St. Louis: Demand fair; trend firm; supply ample; dehydrated, 17% protein, 100,000 units of vitamin A pellets $46.50.

Seattle: Demand fair; trend steady; supply ample; suncured, 15% protein $39, Seattle, no change; dehydrated, 150,000 A units $67, Seattle, no change.

Minneapolis: 17% dehydrated, 100,000 units vitamin A reground pellets $49, up $1; oiled reground $50, up $1.

Buffalo: Demand and supply fair; trend higher; $58.10, sacked, Boston, up $2.

Los Angeles: Demand fair; trend steady; supply adequate; dehydrated meal, 17% protein, 100,000 A $50@51; dehydrated pellet meal, 17% protein, 100,000 A $52@54; suncured meal, 15% protein $41@42; suncured crumbles, 15% protein $43@44; all unchanged.

Denver: Demand fair; trend steady; supply ample; dehydrated $42.

Ft. Worth: Demand poor; trend steady; supply sufficient; dehydrated, 17%, 100,000 A $53, sacked, rail or truck, unchanged; suncured, 13% ¼-in. grind, No. 1 $42, truck, down $1.

ANIMAL FAT (STABILIZED)

Boston: Demand and supply steady; trend steady; tallow 5¼¢ lb., yellow grease 5@5¼¢ lb., both unchanged.

Chicago: Demand fair; trend firm; supply adequate; bleachable fancy tallow $5.87½ cwt., yellow grease $5.37½ cwt.; both tank truck or carlots.

Memphis: Demand slow; trend steady; supply adequate; yellow grease 4¾¢ lb., prime tallow 5¼¢ lb., both down ¼¢.

St. Louis: Demand fair; trend steady; supply ample; yellow grease 4¾¢ lb., delivered tank trucks or cars.

St. Paul: Demand good; supply ample; trend steadier; off ¼¢ to 5⅛¢ lb., f.o.b. producer's plant.

Atlanta: Demand good; trend steady; supply ample; 5¢ lb., f.o.b. Georgia and Alabama production points.

Los Angeles: Demand steady; trend easier; supply ample; 5¾¢ lb., unchanged.

Ft. Worth: Demand fair; trend steady; supply sufficient; prime tallow, tank cars 5¼¢ lb.; drums 6⅜@7¼¢ lb., f.o.b. north Texas packing plants with returnable drums, unchanged.

BARLEY FEED

Chicago: Demand and supply fair; trend firm; $35, sacked.

Baltimore: Demand quiet; trend steady; supply fair; $45.50, sacked.

Boston: Demand and supply light; trend steady; $45.50, unchanged.

Los Angeles: Demand slow; trend steady; supply adequate; $2.60 cwt., unchanged.

Seattle: Demand good; trend firm; supply fair; $48, truck lots, unchanged.

Denver: Demand fair; trend steady; supply short; $2.55 sacked, $2.30 bulk.

BLOOD MEAL

Chicago: Demand good; trend firm; supply fair; 80% protein $132.50, sacked.

Los Angeles: Demand good; trend firmer; supply tight; $5.50@5.75 a unit of ammonia, sacked, 25¢ higher.

BONE MEAL (STEAMED)

Cincinnati: Demand slow; trend easy; supply fair; $95, sacked, Cincinnati, down $5.

Chicago: Demand and supply fair; trend steady; $97.50, sacked.

Boston: Demand and supply steady; trend steady; $105, unchanged.

Seattle: Demand fair; trend steady; supply good; $92, f.o.b. car Seattle, sacked, unchanged.

Buffalo: Demand and trend steady; supply fair; $105, sacked, f.o.b. Buffalo, unchanged.

Denver: Demand good; trend steady; supply ample; $112.

Los Angeles: Demand fair; trend steady; supply adequate; imported $78.50, 20 ton lots, sacked, unchanged.

Ft. Worth: Demand good; trend steady; supply moderate; domestic $100, sacked, f.o.b. Ft. Worth, unchanged.

BREWERS DRIED GRAINS

St. Louis: Demand good; trend firm; supply tight; 26% protein $40.

Chicago: Demand less aggressive; trend easier by 50¢@$1; supply good; 26% protein $37.50.

Boston: Demand good; trend steady; supply adequate; $49, unchanged to $2 higher.

Cincinnati: Demand poor; trend steady; supply adequate; $48.50, up 50¢.

Los Angeles: Demand and trend steady; supply light; $51, unchanged.

Buffalo: Demand and supply fair; trend steady to lower; $49.50, Boston, off 50¢.

Ft. Worth: Demand slow; trend steady; supply sufficient; 26% protein $54.50, sacked, October, unchanged.

BREWERS DRIED YEAST

Cincinnati: 9@10¢ lb., sacked, unchanged.

St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Chicago: Demand fair; trend steady; supply ample; 9½@10¢ lb., carlots, sacked; 9¾@12½¢ lb., l.c.l.

Boston: Demand and supply steady; trend steady; 11¢ lb., unchanged.

Buffalo: Demand good; trend little firmer; supply only fair; $9 cwt., f.o.b. Buffalo, up 5¢.

Seattle: Demand slow; trend steady; supply ample; $12 cwt., sacked.

Los Angeles: Demand good; trend steady; supply adequate; 10¢ lb., 5 ton lots, sacked; 11¢ lb., 1 ton lots, sacked; 12¢ lb., less than ton lots, sacked; all unchanged.

CALCIUM CARBONATE

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.05; granular grind $1 premium.

Minneapolis: Fine grind, 50 lb. bags $13.75; 100 lb. bags $13; bulk, boxcar $11.50; bulk, hopper $11; coarse grind $1 premium, delivered Minneapolis.

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt., unchanged.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, sacked.

Los Angeles: Demand fair; trend steady; supply adequate; flour $9.85, 20 ton cars, sacked; meal $10.20, 20 ton cars, sacked; both unchanged.

Denver: Demand fair; trend steady; supply ample; $12.50, carload.

Ft. Worth: Demand normal; trend steady; supply sufficient; $7.50, sacked, f.o.b. north Texas, unchanged.

COCONUT OIL MEAL

Portland: Demand slow; supply adequate; trend unchanged; 20% solvent $65.20.

Seattle: Demand fair; trend steady; supply ample; solvent type $71, f.o.b. car Seattle, sacked, unchanged.

Los Angeles: Demand slow; trend weaker; supply adequate; copra cake $63@64, down $1@2.

CONDENSED FISH SOLUBLES

Boston: Demand active; trend firm; supply tight; $55, nominal, unchanged.

Los Angeles: Demand firm; trend steady; supply limited; 3½¢ lb., unchanged.

Denver: Demand weak; trend steady; supply ample; 3¢ lb., f.o.b. West Coast.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are bulk basis, sacked basis $6 more)

Minneapolis: Feed $41.70, meal $70.70.
Atlanta: Feed $45.10, meal $74.10.
Birmingham: Feed $42.90, meal $71.90.
Boston: Feed $46.60, meal $75.60.
Chicago: Feed $35, meal $64.
Cleveland: Feed $43, meal $72.
Denver: Feed $45.30, meal $74.30.
Ft. Worth: Feed $45.80, meal $72.80.
Indianapolis: Feed $40.25, meal $69.25.
Kansas City: Feed $35, meal $64.
Louisville: Feed $41.55, meal $70.55.
New York: Feed $46.20, meal $75.20.
Norfolk: Feed $45.60, meal $74.60.
Philadelphia: Feed $45.80, meal $74.80.
St. Louis: Feed $35, meal $64.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $42, unchanged.

Seattle: Demand good; trend easy; supply ample; $51 car, up 50¢.

COTTONSEED OIL MEAL

Kansas City: Demand fair; trend steady; supply ample; 41% solvent process $56.70, unchanged; 41% old process $58.70, unchanged to 50¢ up.

Portland: Demand slow; supply adequate; trend unchanged; 41% solvent $67.20.

Cincinnati: Demand fair; trend steady; supply adequate; $57, down 50¢.

Memphis: Demand fair; trend steady; supply ample; prime 41% protein old process $51, unchanged; new process 41% protein $50, down 50¢.

St. Louis: Demand good; trend easy; supply ample; 41% solvent process $50, Memphis basis.

Atlanta: Demand good; trend stronger; supply limited; 41% $59 South Carolina, North Carolina and Georgia, $55 north Alabama, $54 Mississippi, $55 Tennessee producing mills.

Seattle: Demand good; trend steady; supply ample; 41% expeller $69, f.o.b. car Seattle, unchanged.

Buffalo: Demand fair to poor; trend steady; supply adequate; $73.70, sacked, Boston, unchanged.

Los Angeles: Demand slow; trend steady; supply ample; $55@56, nominal, unchanged.

Denver: Demand fair; trend steady; supply scarce; $61.

Ft. Worth: Demand fair to good; trend steady; supply still tight with some mills as rains delaying cotton harvest; 41% old process $59@60, f.o.b. mills Ft. Worth, unchanged; loose hulls $12@14, unchanged to $1 higher; solvent with 2% fat added $56.60, down 40¢.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $43.50, sacked, $40.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

DEFLUORINATED PHOSPHATE

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $61.25, sacked, 100 lb. multiwall bags, bulk $58.25; truck load $62, sacked, in 100 lb. multiwall bags, bulk $69, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $52, f.o.b. Tupelo in 100 lb. multiwall bags, $49 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $66 (or $3.67 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, minimum fluorine .15% $81 (or $4.5u per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck lots of less than 10 tons $10 more, bagged or bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.35 net ton, f.o.b. Houston, 100 lb. multiwall bags; $66.35 bulk ($3.65 per unit of P).

Port Arthur, Texas: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload and truck load $65.75, sacked, 100 lb. multiwall bags; bulk $62.75, f.o.b. Port Arthur.

Cincinnati: 18% phosphorus, carlots $74.30, ton lots $84.30; 14% phosphorus, carlots $62.50, ton lots $72.50; Cincinnati, unchanged.

Ft. Worth: Demand good; trend steady; supply adequate; minimum 18% phosphorus, maximum 34% calcium, maximum .18% fluorine $73.45, sacked, down $2.80.

DICALCIUM PHOSPHATE

Chicago: Bulk, carlots and truck loads, 18½% phosphate $78 and 21% phosphate $89; packed in 100 lb. papers, 10 tons or more, 18½% phosphate $81 and 21% $92; lesser quantities, 18½% phosphate $91 and 21% $102; above prices per ton, f.o.b. Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum phosphorus 18½%, granular, $81 (or $4.38 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants: California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truck loads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18.5%, minimum calcium 24% $81, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum calcium 23%, maximum fluorine .12%; carload and truck load $75.50, sacked, in 100 lb. multiwall bags, bulk $72.50, f.o.b. Texas City.

Trenton, Mich.: 18½% phosphorus and 23% calcium, bulk boxcar/hopper car $78, bagged $81; 21% phosphorus product production discontinued.

Cincinnati: 18½% phosphorus $88.80, bagged in carloads; $98.70, bagged in ton lots, f.o.b. Cincinnati; $81, f.o.b. production points, unchanged.

Buffalo: Demand good; trend steady; supply good; $82.90, sacked, Boston, unchanged.

Denver: Demand good; trend steady; supply short; $88.50, carload.

Los Angeles: Demand and trend steady; supply adequate; 18½% phosphorus $95.10, sacked, unchanged.

Seattle: Demand good; trend steady; supply limited; $91, ex-dock, Seattle, sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply adequate; $81.50, sacked, unchanged.

DISTILLERS DRIED GRAINS

Cincinnati: Demand fair; trend steady; supply adequate; $46@47, unchanged.

Boston: Demand slow; trend easier; supply adequate; $51, down $2.

Buffalo: Demand fair; trend steady to lower; supply good; $52, Boston, off $2.

DRIED BEET PULP

Portland: Demand good; trend steady; supply adequate; $47.50, sacked.

Boston: Demand slow; trend easier; supply ample; $53.50, off 50¢@$1.

Seattle: Demand fair; trend steady; supply ample; $48, delivered carlots, sacked, unchanged.

Buffalo: Demand fair; trend steady to lower; supply adequate; $53.50, sacked, Boston, off $1.50.

Denver: Demand light; trend steady; supply short; $60.

Los Angeles: Demand and trend steady; supply ample; $47, Los Angeles milk shed area, unchanged.

Atlanta: Demand fair; trend steady; supply good; $53.40, sacked, delivered.

Ft. Worth: Demand slow; new crop now being offered; plain $55, sacked, October through December.

DRIED BUTTERMILK

Boston: Demand and supply fair; trend steady; 14¢ lb., unchanged.

Chicago: Demand slow; trend firm; supply adequate; medium acid $9.75@10.25 cwt., sweet cream $9.75@10.25 cwt., both sacked.

Buffalo: Demand fair; trend steady; supply adequate; $10.60 cwt., f.o.b. Buffalo, unchanged.

Los Angeles: Demand fair; trend steady; supply light; 14@14¼¢ lb., sacked, unchanged.

DRIED CITRUS PULP

Boston: Demand slow; trend steady; supply adequate; $53.50, unchanged.

Buffalo: Demand fair to poor; trend lower; supply adequate; $52.50, sacked, f.o.b. Florida points, off $2.50.

Atlanta: Demand fair; trend steady; supply good; pulp $52.50, sacked; meal $27.50@30, sacked; both f.o.b. Florida processing plants.

Los Angeles: Demand steady; trend firm; supply limited; orange pulp $43, lemon pulp $40@41, both unchanged.

DRIED SKIM MILK

Chicago: Demand slow; trend steady; supply ample; $11.50@12 cwt., sacked.

Boston: Demand and supply in balance; trend steady; 13¼¢ lb., unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked, unchanged.

Minneapolis: Demand good; supplies light; price steady at $13.25 cwt.

Buffalo: Demand good; trend steady; supply adequate; spray $11.60 cwt., f.o.b. Buffalo, unchanged.

Los Angeles: Demand slow; trend steady; supply adequate; 14¢ lb., less than ton lots, sacked; 13¾¢ lb., ton lots, sacked; both unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; $16.50 cwt., sacked, unchanged.

DRIED WHEY

Kansas City: Demand fair; trend steady; supply ample; $4.50 cwt., sacked, unchanged.

Chicago: Demand quiet; trend steady; supply ample; $4.75 cwt., sacked.

Boston: Demand and supply steady; trend steady; $4.85 cwt., unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked, unchanged.

Minneapolis: Demand good; supply tight; price still unchanged at $4.75 cwt., f.o.b. shipping points.

Denver: Demand light; trend steady; supply ample; $5.25 cwt., carload.

Los Angeles: Demand fair; trend steady; supply adequate; $5.10 cwt., carload, sacked; $5.25 cwt., l.c.l., sacked; both unchanged.

Seattle: Demand steady; trend easy; supply good; $5.70 cwt., ex-warehouse, l.c.l., unchanged.

Ft. Worth: Demand fair; trend steady; supply adequate; standard $4.75, sacked, truck or rail, delivered Ft. Worth; small lots $5.25, f.o.b. warehouse Ft. Worth, unchanged.

FEATHER MEAL (HYDROLYZED)

Boston: Demand slow; supply adequate; trend unsettled; $81.50, unchanged.

Memphis: Demand slow; trend steady; supply adequate; 85% meal $82, down $3.

Atlanta: Demand good; trend steady; supply short; $85, f.o.b. Alabama and Georgia production plants.

Los Angeles: Demand good; trend firm; supply adequate; $1 a unit of protein, sacked, unchanged.

Ft. Worth: Demand good; trend steady; supply sufficient; exporters taking production of some plants; 85% protein $80@82.50, delivered Ft. Worth, unchanged.

FISH MEAL

Boston: Demand active; trend strong; supply very tight; white fish $117, red fish $112, both nominally unchanged.

Portland: Demand fair; trend higher; supply tight; $1.95 a protein unit, sacked.

Cincinnati: Demand fair; trend steady; supply adequate; $113.10, unchanged.

Minneapolis: Canadian herring steady at $1.85 a unit, spot, f.o.b. West Coast; $1.75 subject to production; 60% West Coast blended steady at $138.

Chicago: Demand fair; supply light; trend $1 higher; menhaden, East Coast $117@120, Gulf $117@120; scrap, East Coast $113@116 and Gulf $113@116; Canadian herring $1.70@1.80 a unit of protein.

Seattle: Demand good; trend steady; supply fair; Canadian production $1.85 a unit protein, f.o.b. truck Vancouver, B. C.; up 5¢.

Buffalo: Demand light; trend firm; unavailable; 60% protein menhaden $132.50, f.o.b. Buffalo, unchanged.

Atlanta: Demand good; trend steady; supply short; 60% menhaden $115, sacked, f.o.b. Atlantic ports.

Los Angeles: Demand better; trend easier; supply adequate; local production, 60% protein $1.82½@1.87½ a unit, unchanged to 2½¢ weaker.

Denver: Demand slow; trend steady; supply short; $1.85 a protein unit, f.o.b. West Coast.

Ft. Worth: Demand good; trend steady at present level; supply sufficient on Peruvian, limited on menhaden; sacked: 65% protein Peruvian $116.50@119, down $2; 60% new crop menhaden $121.50@124, up 50¢@$1.

HOMINY FEED

Kansas City: Demand fair; trend firm; supply tight for spot; yellow hominy $34.50@35, up $1@1.50.

Cincinnati: Demand fair; trend lower; supply adequate; $38.50, down $3.50.

Boston: Demand cautious; trend unsettled

(Turn to QUOTES, page 108)

Major Markets Roundup

Soybean Oil Meal Reverses Price Downtrend

Reversal of the long downtrend in the price of soybean oil meal was the talk of the ingredient market this week. After its nearly $20 decline over a period of several weeks, meal made an about-turn this week, showing up $3 to $4.50 stronger at midweek on the Chicago market as compared with a week earlier. Some of the increase was attributed to farmers' not marketing their beans.

Some strength was also noted in millfeeds.

Dehydrated alfalfa meal advanced in a number of the ingredient markets around the country. This was attributed more to the rapidly approaching end of the season than to increased demand.

Meat and bone meal and tankage were again weak, but did not show as sharp declines as during earlier trading periods.

Volume of business in ingredients was limited as buying was still pretty much on an as-needed basis.

The over-all index for feedstuffs, as computed by the U.S. Department of Agriculture for the period ending Oct. 10, was down 1.1.

Price index figures for the various ingredients for the period Oct. 3 to Oct. 10 appear in the accompanying table.

East

BOSTON: Millfeeds were still fluctuating in a relatively narrow range in the local market during the week.

Buyers apparently saw no immediate need to enter the market for supplies beyond nearby requirements. Good pasturage conditions continued to justify the position of keeping current inventories at a minimum. Bran and middlings were in adequate supply despite the labor difficulties at one of the major mills.

Outstanding weak spots included hominy feed and beet pulp. On the firmer side were alfalfa meal and brewers grains.

BUFFALO: Corn prices marched up the hill and back down again amid confusion over the Commodity Credit Corp. selling policy.

Despite government denials, some think that a change is in the offing. Cash corn was off 1 to 2¢ from a week ago. The ingredient market, as a whole, continued slow, with a tendency to the downside.

Soybean oil meal, however, reversed its recent weakness with a 50¢ rise. Other vegetable proteins were steady.

Meat scraps continued to slide with a further drop of $2.50. Alfalfa meal advanced $2, but hominy skidded $2. Distillers' grains also dropped $2, and brewers' grains edged off 50¢.

Millfeeds turned firm as big mixers and the country trade came into the market. Supplies were tight as one big flour mill on the waterfront remained shut down because of a labor dispute. Bran was up 50¢; middlings advanced $1.50 and red dog was marked up $1.

SALISBURY, MD.: Soybean and corn harvest in the Delmarva area is about two weeks earlier than usual. Warm, summer-like days have given farmers an opportunity to begin harvest without any stopping due to rain. Farmers are rushing to get in on the early prices.

Delmarva now has an abundant supply of soybean oil meal, most of which will go into broiler rations. Townsend, Inc., has made several enlargements of its soybean processing plant. A. W. Perdue & Son has a new mill which will use 20 to 30% of the peninsula's bean crop.

Prices of whole corn and soybean meal to the mill have started to fall. Soybean meal was down 4.5% last week, and coarse cracked corn was down just slightly. Significant changes in other feed ingredients last week were: Alfalfa meal up over 5½%; standard bran up over 3½%, and 50% meat scrap down almost 3.5%.

Midwest

CINCINNATI: Volume of business in the feed ingredient market increased slightly this week with supplies adequate to meet the demand.

Alfalfa meal advanced $3. Screenings were up $1 and brewers dried grains inched up 50¢.

On the lower side were: Steamed bone meal, $5; hominy feed, $3.50; bone scraps, $2.50, and millfeeds, $1.50.

CHICAGO: The soybean meal toboggan slide stopped this week and the commodity made a "U" turn. Prices Oct. 11 were $3 to $4.50 higher than they had been a week earlier.

Unrestricted billing 44% meal, Decatur basis, was quoted at $55, up $4.50, and ETL billing was $49, up $3. Fifty percent meal, unrestricted, was quoted at $60, up $4.50, and ETL was $54, up $3.50.

Meal futures also staged a price comeback during the week, recovering about $3 per ton on the more active months.

MINNEAPOLIS - ST. PAUL: The feature of the local ingredient market this week was the about-turn by soybean oil meal. The product which had declined to $46 for the 44% during the week was pegged at $47.50 late this week.

Animal proteins continued their slide. Meat and bone meal was off $2 to $4 to a range of $83 to $86, and tankage was off $1 to $2 to a range of $89 to $93. Animal fat dropped another ½¢ to 5½¢ lb.

Alfalfa meal prices were up $1 to $49 for the 17% dehydrated, 100,000 unit vitamin A reground and $50 for oiled reground.

Millfeeds moved $1 to $1.50 higher under improved demand.

Oat products ranged from $1 higher to $2 lower.

ST. LOUIS: Feed ingredient trading was rather routine with little net change developing pricewise. Demand held up well, but buyers seldom covered for more than nearby requirements.

Following a long drawn out drop in both vegetable and animal protein prices, the downturn tapered off the last few days. Producers said there are a lot of bears in the market who expect pressure on prices to build up again and, while waiting, use hand-to-mouth buying. Quick shipment material commands a small premium and ofttimes takes a little time to locate.

Millfeeds carried a firm undertone, and values gained around $1. There was neither much buying nor selling push apparent, and supplies were fully equal to requirements.

South

ATLANTA: Cotton gin operators are pulling heavy supplies of cottonseed meal and hulls from the mills in North Carolina, South Carolina, Georgia and Alabama to exchange for seed to the farmer, and this has resulted in practically no offerings from the mills. Because of slow seed movement and good buying interest in the Mississippi Valley, prices have advanced $2 per ton with the mills that have anything to sell, while others have withdrawn from the market.

Weather conditions have been excellent for harvesting corn, and good supplies are available, with demand being on the slow side. Prices range from $1.08, f.o.b., to $1.25, delivered, depending upon location.

Practically all citrus pulp processors reduced their prices this week and last week by $2.50 per ton, hoping to stimulate some buying interest. Shipments are picking up a little bit, but not as heavily as usual for this time of the year. But, many look for it to improve during the next two weeks.

MEMPHIS: Prices of ingredients were mixed on the Memphis market, with demand generally termed fair.

Buyers still lacked faith in the market to purchase ahead for animal or poultry by-products. Although reports were heard that feed business is slightly better, a large potential supply of vegetable proteins remains for this production year.

Alfalfa meal strengthened as the producing season neared an end.

Cottonseed oil meal quotations were about the same as a week ago. Demand was only fair as buyers covered only nearby needs. Offerings for nearby shipment failed to attract much interest.

Soybean oil meal strengthened early this week after a weaker market appeared likely the previous week. Offerings of Oct. 10 were $1 a ton higher. Demand was confined mostly to nearby shipment. Deferred offerings were not attracting buyers.

A slight gain occurred in millfeed, especially bulk middlings, which found a ready market. Sacked feed demand was fair.

Oilseed meal futures moved upward on the Memphis Board of Trade, compared with one week earlier.

Unrestricted soybean oil meal closed Oct. 10 unchanged to $1 per ton higher than on Oct. 3 and bulk solvent cottonseed oil meal showed a similar rise.

Strength of soybean futures at the end of the period helped bolster the market.

Trading activity was limited to 1,000 tons of unrestricted soybean oil meal.

Southwest

KANSAS CITY: The prices of most major ingredients were on the higher side for the week with demand good for spot shipment of most items.

Soybean meal bounced back about $2 from its low reached early in the week. There has been a good demand for nearby shipment meal and some workings of deferred contracts, but the deferred business was not heavy.

Cottonseed meal is up about $1 for the week. There is a good consistent demand for meal but part of the advance was attributed to short covering on the part of dealers.

The dehydrated alfalfa market advanced $2 as production is drawing to a close. Demand is fair; however, the increase came more from the fact that the end of the season is fast approaching rather than from any greatly improved demand.

Millfeed prices moved higher this week as demand for the wheat offal picked up.

FT. WORTH: While some feed ingredients were lower than last week, the decline was not as drastic as in the past few weeks. Meat and bone meal was down another $2.50, reground oatfeed $1.50, suncured alfalfa meal $1, poultry by-products $2.50, defluorinated phosphate $2.80 and solvent cottonseed oil meal 40¢.

Fifty per cent soybean meal was quoted $1 to $2 lower, but the 44% was about unchanged, and offerings were light for nearby shipment. Peruvian fish meal declined $2, but the menhaden was 50¢ to $1 higher.

Millfeeds were strong with bran up $1.50 to $2.50, shorts up 50¢ to $1 and midds up $1. On account of light offerings of digester tankage, that quotation was up $2.50.

Other ingredients were unchanged. Dealers reported that while bookings of ingredients had been satisfactory, shipping orders were coming in rather slowly, probably due to rains and the mild weather.

Feeds: Average Bulk Prices and Index of Weighted Prices*

(Dollars per ton)

	Oct. 10, 1961	Oct. 3, 1961	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	60.05	61.80	—1.75
Cottonseed meal	57.05	56.80	+ .25
Linseed meal	62.70	62.70	...
Copra cake or meal	58.75	59.50	— .75
Peanut meal	63.00	63.00	...
Index	77.5	78.9	—1.4
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	80.40	83.20	—2.80
Tankage	88.35	91.90	—3.55
Fish meal	115.00	115.35	— .35
Index	77.4	79.3	—1.9
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed and meal	44.85	44.85	...
Dist. dried grains	47.95	48.70	— .75
Brewers dried grains	43.00	42.00	+1.00
Index	70.2	70.2	...
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	36.65	36.50	+ .15
Midds. and shorts	37.90	38.45	— .55
Index	67.3	67.7	— .4
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	39.45	42.20	—2.75
Rice bran	32.00	33.00	—1.00
Index	61.8	65.7	—3.9
ALFALFA MEAL			
Prices at prin. mkts.	47.10	46.60	+ .50
Index	90.7	89.7	+1.0
MOLASSES, FEEDING			
Prices at prin. mkts.	27.23	27.35	— .12
Index	81.0	81.4	— .4
ALL FEEDSTUFFS			
Index	74.6	75.7	—1.1
FEED GRAINS			
Prices at prin. mkts.:			
Corn	38.30	37.80	+ .50
Oats	44.00	43.80	+ .20
Barley	45.70	45.80	— .10
Grain sorghums	38.00	39.00	—1.00
Index	62.9	62.4	+ .5

*Base period of index is 1947-49.
Source: USDA.

West

SEATTLE: Soybean oil meal was up $1 per ton to $74.60, bulk, Seattle.

Montana linseed oil meal is still off the market. With the flax crop in Montana down 80%, there is not expected to be much linseed oil meal available from this area.

Canadian herring was down 5¢ per unit to $1.88 for prompt and $1.80 for November-December, subject to production. Meat meal was down another 5¢ per unit to $1.65, with supply now exceeding demand. However, with meat meal now well under fish meal, most of the poultry feed manufacturers are expected to increase their usage of meat meal.

No. 2 yellow corn was up about 50¢ per ton to $50.50. Milo also strengthened the same amount to $48.50. There is little demand for milo at the present spread between corn and milo.

Millrun firmed $2 to $37 bulk with the flour trend slightly down and demand for millrun up.

PORTLAND: Feed ingredient prices here and in other Pacific Northwest markets averaged mixed during the week in the face of slow trading and a moderate demand.

Trade sources indicated that most buyers were limiting purchases to the immediate and prompt positions. Further sharp downward adjustments in soybean meal prices were partially offset by continued firm listings for barley, fish meal and millfeed.

Soybean meal quotes declined $3 to $4 a ton during the trading period as a reflection of increased new crop

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KANSAS CITY, MISSOURI

offerings from eastern shippers. Area buyers continue to wait for further downward adjustments and filled only bare nearby needs. Prices for other oilseed meals were barely unchanged during dull trading.

Animal protein feed ingredients followed a mixed price trend. Meat and bone meal listings carried a soft undertone, but fish meal prices gained about 5¢ a unit of protein as a result of tighter Canadian supplies.

Wheat millfeed values advanced 50¢ to $1 a ton.

Other Reports

MOLASSES: Sugar cane harvest is expected to begin next week in Louisiana and the last week in October in Florida, according to the U.S. Department of Agriculture.

Hurricane Carla caused about 10% of the cane crop to be slanted or down, but very little, if any, is expected to be lost, USDA said. The department indicates that yield prospects are good to excellent.

QUOTES

(Continued from page 107)

to weak; supply plentiful; $46, off $3.50.

Memphis: Demand poor; trend weak; supply ample; white $39.80, yellow $39.80, both down $1.

Chicago: Demand quiet; trend $3 lower; supply ample; $37.

St. Louis: Demand fair; trend steady; supply ample; yellow $38.

Buffalo: Demand and supply fair; trend steady to lower; $47, Boston, off $2.

Seattle: Demand fair; trend steady; supply limited; $50, delivered, carlots, unchanged.

Los Angeles: Demand good; trend firm; supply tight; hominy meal $50, hominy pellets $52; both unchanged.

LINSEED OIL MEAL

Chicago: Demand and supply fair; trend unchanged; solvent $54.50, expeller $59.50, Minneapolis basis.

Portland: Demand slow; trend steady; supply light; 34% solvent $56.50, sacked.

Boston: Demand and supply light; trend steady; 34% $71.70, unchanged.

Cincinnati: Demand poor; trend steady; supply adequate; new process $55, old process $60, Minneapolis, up 50¢.

Los Angeles: Demand slow; trend steady; supply adequate; local production, 31% protein $73, unchanged.

Seattle: Demand fair; trend steady; supply limited; 34% protein (Montana) $59, delivered carloads, sacked, unchanged.

Minneapolis: Demand fair; supply adequate; price of 34% solvent steady at $54.50.

Buffalo: Demand fair; trend steady; supply adequate; $54.50, Minneapolis, unchanged.

Denver: Demand fair; trend steady; supply ample; $58.50.

Ft. Worth: Demand slow; trend steady; supply moderate; 34% protein extracted $70.20, October, unchanged.

MEAT AND BONE MEAL

Cincinnati: Demand good; trend steady; supply short; 50% meat and bone scrape $76, Cincinnati, down $2.50.

Boston: Demand and supply steady; trend steady; $1.10 a protein unit; converted 50% $77; both unchanged.

Chicago: Demand fair; trend $2.50 lower; supply ample; 50% protein $87.50, sacked.

Portland: Demand fair; trend lower; supply ample; $81.50, sacked.

Memphis: Demand slow; trend steady to slightly higher; supply adequate; 50% protein $80, nominal, without billing, up $2.50; 50% protein $83, nominal, with rail transit, up $2.

St. Louis: Demand fair; trend firmer; supply ample; 50% $75.

Buffalo: Demand quiet; trend steady; supply light; 50% meat scrape $72.50, f.o.b. Buffalo, off $2.50.

St. Paul: Demand slow; supply adequate; price off $2@4 to $83@86.

Seattle: Demand fair; trend steady; supply ample; $1.65 a unit protein, ex-processing plant, sacked, down 5¢.

Denver: Demand fair; trend steady; supply fair; $80.

Los Angeles: Demand good; trend firm; supply tight; 50% protein $1.75 a unit, unchanged.

Ft. Worth: Demand fair; trend lower; supply sufficient; meat and bone $77.50 bulk, $80 sacked, f.o.b. Ft. Worth, down $2.50.

MEXICAN PHOSPHATE

Brownsville, Texas: Mexican natural ground rock; 13% phosphorus $39 sacked, bulk $2 less.

MILLFEED

Boston: Demand cautious; trend unsettled; supply spotty; bran $43.60, unchanged; middlings $44.60, up 50¢.

Memphis: Demand fair; trend steady; supply ample, wheat bran $36.30, up 50¢; gray shorts $38.30, unchanged; standard midds. $37.80, up $1.50.

Chicago: Demand improved; trend $2@2.50 up; supply moderate; standard bran $34, standard midds. $35.50, red dog $37.50.

Cincinnati: Demand fair; trend steady; supply adequate; bran $37.50, middlings $39.50, both down $1.50.

Kansas City: Demand fair; trend stronger; supply adequate; sacked bran $35.50@36, up $2; sacked shorts $34.50@35, up 50¢; bulk bran $29.50@30, up $1.50; bulk shorts $31@31.50, up $1; bulk middlings $31@31.50, up $2.

Portland: Demand slow; trend strong; supply tight; $35.50@36, sacked.

St. Louis: Demand good; trend firm; supply ample; sacked bran $40.50, shorts $40; bulk bran $33.50, middlings $35.

Denver: Demand good; trend steady to stronger; supply limited; shorts $38.25, bran $36.25, millrun $38.75.

Los Angeles: Standard millrun $44@45, demand good, trend firmer, supplies tight, unchanged to 50¢ higher; red bran $47.50, demand light, trend firmer, supplies light, unchanged.

Seattle: Demand and supply good; trend firm; $37, delivered common transit points, carlots, up $2.

Minneapolis: Demand improved; supplies tighter; sacked bran $1 higher, $36@36.50; sacked middlings up $1.50, $35.50@36; sacked red dog steady at $41.

Buffalo: Demand fair to good; trend higher; supply fair; bran $36, up 50¢; middlings $37.50, up $1.50; red dog $39, up $1; all prices f.o.b. Buffalo.

Ft. Worth: Demand good; trend strong; offerings light for immediate; bran, bulk $38.50, burlaps $44; gray shorts, bulk $40.50, burlaps $45; middlings, bulk $39.50, delivered Texas common points; bulk bran up $1.50, sacked bran up $2.50, shorts up 50¢@$1, middlings up $1.

MOLASSES

Boston: Demand fair; trend unsettled; supply adequate; 16½¢ gal., tank cars, unchanged.

Kansas City: Demand slow; trend weaker; supply ample; 13⅛@13⅜¢ gal., New Orleans, unchanged to ¼¢ down.

Memphis: Demand fair; trend steady to slightly lower; supply ample; blackstrap 13½@13¾¢ gal., tank car, f.o.b. New Orleans, down ⅛¢; $29.74 ton, delivered Memphis, truck, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 13¾¢ gal., New Orleans, down ¼¢.

St. Louis: Demand slow; trend easy; supply ample; blackstrap 13½¢ gal., tank cars, New Orleans.

Atlanta: Demand fair; trend steady; supply short; citrus $20, f.o.b. Florida processing plants.

Minneapolis: Prices unchanged at $35 for blackstrap, tank truck, delivered; $31 for beet; $32 for blend.

Buffalo: Demand fair; trend steady; supply adequate; 16½¢ gal., f.o.b. Albany, unchanged.

Seattle: Demand fair; trend firm; supply good; $28.75, f.o.b. Seattle tank truck lots, unchanged.

Los Angeles: Demand good; trend weaker; supply ample; $24.50, f.o.b. tank cars, down $1; $24.75, f.o.b. tank trucks, down $1.

Denver: Demand fair; trend steady; supply ample; $32.70, tank car.

Ft. Worth: Demand fair; trend steady; supply sufficient; blackstrap 14¢ gal., f.o.b. Houston, truck $30.64, delivered Ft. Worth, seller's market price on date of shipment, down ¼¢ gal.

OAT PRODUCTS

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $45@51, unchanged.

Chicago: Demand and supply fair; trend steady; reground oat feed $10; No. 1 fine ground feeding oatmeal $73; feeding rolled oats $74@78.

Kansas City: Demand fair; trend steady to lower; supply ample; oat mill products $13@14, sacked, unchanged to down $1; feeding rolled oats $74@75, sacked, unchanged.

Boston: Demand inactive; trend steady; supply ample; white pulverized $52, unchanged; reground oat feed $24.10, down 90¢.

St. Louis: Demand fair; trend steady; supply ample; white pulverized $43; reground oat feed $10.50.

Seattle: Demand fair; trend steady; supply good; 38 lb. or better $51, delivered truck lots, unchanged.

Minneapolis: Demand slow; supplies adequate; sacked feeding rolled up $1 to $32; sacked feeding oatmeal steady at $66; sacked crimped up $1 to $62; sacked pulverized off $2 to $46; sacked oat feed steady at $20.

Buffalo: Demand fair to poor; trend steady to lower; supply adequate; $24.60, sacked, Boston, off $1.

Ft. Worth: Demand slow; trend steady; supply sufficient; 10% protein oat millfeed $41, sacked, unchanged; reground $31.30, sacked, down $1.50.

PEANUT OIL MEAL

Atlanta: Demand good; trend steady; supply short; 45% $59, Alabama producing mills.

Los Angeles: Nothing available for quotation purposes.

POULTRY BY-PRODUCTS

Boston: Demand spotty; trend steady; supply light; $100, nominal, unchanged.

Memphis: Demand slow; trend steady; supply adequate; 55% meal $85, sacked, up $2.50.

Atlanta: Demand fair; trend steady; supply good; meat meal $72.50, f.o.b. Alabama and Georgia production points.

Los Angeles: Demand good; trend firm; supply adequate; $1.55 a unit of protein, sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply scarce due to export demand; $90@92.50, sacked, f.o.b. Texas plants, down $2.50.

RICE BY-PRODUCTS

Buffalo: Demand good; trend steady; supply limited; $56, f.o.b. Buffalo, unchanged.

Atlanta: Demand fair; trend steady; supply limited; bran $44, sacked, delivered.

Los Angeles: Demand slow; trend steady; supply very limited; California production, high fat content, bran $50, sacked, unchanged.

Ft. Worth: Demand fair; trend steady; limited offerings standard rice bran, sufficient on solvent; standard rice bran, sacked $37, f.o.b. Houston; solvent rice bran $30.50 bulk, $34.50 sacked, f.o.b. south Texas rice mill, unchanged.

SCREENINGS

Chicago: Demand fair; trend higher; supply ample; ground grain $30.50; Canadian $23.80.

Cincinnati: Demand fair; trend steady; supply adequate; unground grain screenings $18.75@19.75, up $1.

Buffalo: Demand and supply fair; trend steady; ground, sacked $32.25, New York, lake and rail, unchanged; bulk, unground $27.50, New York, unchanged.

Minneapolis: Demand slow; supplies ample; prices steady; unground Canadian $18; domestic lights $3@10; domestic mediums $12@20; domestic heavies $20@28; 15% flax screenings $42.

Los Angeles: Demand slow; trend steady; supply adequate; barley $35, sacked, unchanged.

SOFT PHOSPHATE

(Sacked, delivered)

Atlanta: $20.25.
Buffalo: $25.50.
Chicago: $24.96.
Cincinnati: $23.64.
Des Moines: $25.42.
Kansas City: $25.07.
Memphis: $22.28.
Minneapolis: $26.12.
Philadelphia: $24.51.
St. Louis: $24.32.

SOYBEAN OIL MEAL

Boston: Demand spotty; trend unsettled; supply ample; 44% $46, off 50¢; 50% $52, up 50¢.

Memphis: Demand fair; trend lower; supply ample; prime 44% solvent $57, f.o.b. Memphis, up $1.

Cincinnati: Demand fair; trend steady to higher; supply adequate; $51, Decatur, unchanged.

Kansas City: Demand good; trend firm; supply adequate; 44% solvent process $50@50.50, Decatur, unchanged.

Portland: Demand slow; trend lower; supply ample; 44% $72.80@73.60; 50% $77.60@78.80.

Chicago: Demand improved; trend $3@4.50 up; supply moderate; Decatur basis, 44% protein, unrestricted billing $55 and E.T.L. $49; 50% protein, unrestricted $60 and E.T.L. $54.

St. Louis: Demand good; trend firm; supply adequate; 44% $51.50, Decatur basis.

Minneapolis: Demand fair; supplies adequate; 44% off to $46 and now back at $47.50, 50¢ lower for the week; 50% up $1 to $55; 41% expeller up 50¢ to $55.

Buffalo: Demand fair; trend steady to higher; supply fair to good; $47, Decatur, up 50¢.

Ft. Worth: Demand good for prompt shipment; trend steady for nearby, uncertain for forward shipment; offerings light for nearby delivery; 44% $63.30, prompt October, about unchanged; $62.90, November-December; 50% $67.30, prompt October through December, down $2.02 on prompt.

Los Angeles: Demand very slow; trend weaker; supply ample; $74.10, down $2@3.

Seattle: Demand fair; trend steady; supply ample; $74.60, delivered, carlots, unchanged.

Denver: Demand fair; trend steady; supply ample; $62.

TANKAGE

Cincinnati: Demand excellent; supply tight; trend steady; 60% digester $86, Cincinnati, down $1.50.

Chicago: Demand fair; trend $5 lower; supply ample; 60% protein $95, sacked.

St. Paul: Demand fair; supplies adequate; price off $1@2 to a range of $89@93.

Ft. Worth: Demand fair; trend steady; supply scarce; 60% digester $90, sacked, Ft. Worth, up $2.50.

UREA FEED COMPOUND

Woodstock, Tenn.: Minimum 42% nitrogen, 262% protein equivalent; $105 bagged, $99 bulk, delivered in all states east of and including New Mexico, Colorado, Wyoming and Montana.

LaPlatte, Neb., and South Point, Ohio: Minimum 42% nitrogen, 262% protein equivalent $96, f.o.b. bagged; $90, bulk, cars or trucks; freight equalized with nearest producing point.

Pryor, Okla.: Minimum 42% nitrogen, 262% protein equivalent, $95 bagged, $91 bulk, f.o.b. Pryor, freight equalized with nearest producing point; $100 bagged, $96 bulk, delivered in cars or trucks to New Mexico, Colorado, Wyoming and all states to the East.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Los Angeles: Demand good; trend steady; supply adequate; 5½¢ lb., unchanged.

Ft. Worth: Demand good; trend steady; supply light; 5¢ lb., f.o.b. north central Texas, unchanged.

SOYBEAN MEAL

(Continued from page 1)

giving away large quantities of bean oil had proven to be a No. 1 dud in stimulating interest, has now proposed a brand new program to popularize soybean meal as a human food among "have-not nations."

How effective this is going to prove is anyone's guess at the moment, but the announcement, coming at a time when meal prices were down into ground not covered this calendar year by $20 per ton or thereabouts, naturally carried a bigger clout than if it had been released even three or four weeks ago.

News that farmers are holding new crop soybeans is also attributed with assisting the price in its "U" turn.

Unrestricted billing 44% meal, Decatur basis, was quoted Oct. 11 at $55, up $4.50, and ETL billing was $49, which is $3 higher for the week. Fifty percent protein meal, unrestricted, was quoted at $60 per ton, up $4.50 and ETL was $54 for an advance of $3.50 for the week.

Much interest is going to be shown in the amount of bean meal in the hands of processors when the regular monthly release by the Census Bureau comes out late next week.

Meal futures, too, staged a good price comeback during the week, with the recovery amounting to around $3 per ton on the more active months. Daily volume of trade has averaged around 1,300 lots of 100 tons each; tenders on open October futures contracts were liberal at nearly 800 lots for the week and the remaining open commitment in the maturing future is now down to below the 200 lot mark.

BROILERS

(Continued from page 1)

way. In Georgia, on the farms, prices steadied at the dime level and reports in midweek from Delmarva gave the range at from 11.5 to 12.7, mostly 12 to 12.4¢.

Whether these prices were to be maintained at the end of the week was anybody's guess. Recently decreases in prices have been noted mostly on Fridays.

It was against this backdrop of prices that the industry was adopting a policy of trying to get by until the first of the year.

Reports have been trickling in of cutbacks here and there. Most sources feel there are more of these than appear on the surface.

To Close Mill

Swift & Co. revealed plans to close its feed mill at Cummings, Ga., as soon as arrangements are completed, which will be around Jan. 1. This mill is in the heart of the north Georgia broiler area. In order to care for the needs of dealers, arrangements are being made, and whether the mill reopens will depend on the future of the broiler business, it was indicated.

Swift also operates a mill, hatchery and processing plant at Douglas, and these operations are not affected, officials said.

Two other operations by independents on the Georgia-Alabama line have been closed, also, it was understood. And in Arkansas, a firm announced that it had discontinued its contract operations.

Further evidence that the industry is trying to "get by" until the first of the year was seen in announcement of the nationwide task-force meeting of all the various poultry associations in Cincinnati Oct. 24-25. It is felt certain that fact-finding committees will be appointed and report back during the latter part of November or the first of December.

Washington Meeting

The news out of Washington that a meeting of broiler growers to consider plans to bring the industry out of its doldrums was advocated by the national agricultural advisory commission, caused very little comment.

The commission suggested the meeting in a special report to Agriculture Secretary Orville Freeman.

The commission made no specific proposals for action, but it was generally interpreted in the trade as another attempt to get marketing orders. The commission pointed out that some broiler growers once against any form of regulation might now be willing to discuss marketing control measures.

The trade was putting accent on the Cincinnati meeting as of more importance at the moment. Whether a recommendation will come out of that session for marketing orders is anyone's guess because even with 10¢ birds, a large segment of the industry is set against any sort of government influence.

As one man said:

"If we can just keep the government out of our hair until after the first of the year, then the market may look brighter."

Market Upturn

Meanwhile, there are also those who believe the market will turn for the better by the middle of November. One man even pinpointed the day the tide will turn: Nov. 13.

Commercial eggs have held up well, although in the past few days have ranged downward. Consumer grade A's were bringing mostly 50 to 51½¢ retail, down 1¢.

The shift from broiler to commercial layers hasn't been significantly noted as yet, although there have been some warnings issued that such a transition may be in the making to a degree. At this stage, it doesn't seem to be a big problem.

CONTROL MOVES

(Continued from page 1)

be further trade examination of the two-day record of the meeting and an effort to compose disagreements within the industry and a final agreement among industry members before they could present any formal proposal to USDA.

At the working level of USDA, where experienced hands understand the administrative problems and pitfalls which can occur, it is the belief that any controls through marketing orders must be taken at the hatching level, where the number of operators is relatively small and where administrative action can be enforced and made equitable at a minimum of expense.

It is understood that the turkey industry is not unanimous on this prospective policy. Some, it is said, prefer federal flock controls, which to USDA workmen would impose a difficult problem.

Explanatory

The first day of the meeting was devoted to an explanatory exposure of committee members to the latitude and authority under the new legislation which specifically included market turkeys and hatching eggs as commodities which may come under the marketing order techniques of the Agricultural Marketing Act of 1937.

This law does not provide any form of production controls or compensatory or parity payments requested by USDA at the last session of Congress.

However, action available under the law would permit USDA, acting on recommendations of an industry group, to bring a withholding or diversion of hatching eggs from normal markets, under direction of supply-management officials.

In the case of requests for a marketing order at the hatchery level—which would limit the number of eggs placed in incubation — the approval would require a two thirds favorable vote by the hatching egg operators, and growers and others would not participate in any referendum.

On the eve of the meeting, it was understood that some of the big turkey states were at odds on whether there should be controls or on types of controls. Some were noted to be in favor of voluntary cutback efforts, although it was mentioned that some group actions could skirt close to anti-trust and other laws.

Incidentally, it also was learned from some top government officials that the Budget Bureau is looking over the shoulders of all policy making officials, and if it is true that the administration is aiming for a budget balance next year, some officials might not take a very favorable view of any control programs which would add substantially to government costs, and some control programs could be costly.

Meanwhile, one aspect of the pressure for marketing orders may reflect the attitude of a top USDA official. This official is now suspected as being a candidate for the Democratic Senate nomination from California next year. At any rate, some observers said that the industry could be indirectly involved in some political ambitions of a currently important USDA official.

MINNESOTA

(Continued from page 1)

manufacturers, hatcherymen, processors, finance people and other representatives of Minnesota's turkey industry—the biggest in the nation—assembled at the hotel to hear about the Minnesota Turkey Growers Assn.'s national campaign aimed at selling the huge turkey crop to the consumer and selling the state's growers out of the hole.

Into this turkey-selling drive has gone $10,000 worth of association money and $15,000 more collected in a special fund campaign. It was frankly admitted that a turkey-selling promotion involving the solicitation of this much money probably could not have come off several months ago. But now, it was said, a strong representation of the state's turkey industry is putting its shoulder behind the wheel.

First Phase

The first phase of the campaign initiated by the Minnesota group is next week's "Turkey Week," proclaimed by Gov. Elmer Andersen. It is the goal of turkeymen to sell one turkey to every Minnesota family during October.

This volume, multiplied on a national scale, association spokesmen said, will eliminate the present market surplus. "We're really not concerned whether it's turkeys from Minnesota or some other state that are sold. Wherever the source, the end result will be the same," said a member of the group.

Following the Minnesota push, the advertising and special-event campaign will fan out to four eastern large-population markets—New York, Chicago, Philadelphia and Boston. Promotional procedures based on Minnesota experience will be utilized in the other markets.

One of the events which is being used as an example for the nation's turkey industry is the recent "Turkey Days" truckload sale of turkeys staged in Buffalo, Minn. During this event, retailers sold 54,000 lb. of turkey in a town of 2,500 population.

A brochure explaining the mechanics of the Buffalo promotion has been disseminated by the Minnesota association to officials of every state turkey industry group, as well as to retailers, promotional groups and farm organizations. Roy Munson, secretary of the Minnesota Turkey Growers Assn., said the success of the Buffalo event has prompted turkey growers in three other Minnesota towns to stage similar events. "Turkey Days" and "truckload sales" are scheduled at St. James Oct. 20, and at Paynesville and Willmar Oct. 21. Willmar has had "turkey days" for several years, but this year truckload sales have been added to take advantage of extra traffic.

This turkey-consumption promotion follows another Minnesota turkey industry effort to initiate voluntary turkey production cutbacks across the nation for the 1962 crop.

Spokesmen at this week's meeting in the Calhoun Beach Hotel said they believe the turkey consumption promotion will be more successful than the Minnesota group's drive to get all states to participate voluntarily in flock reduction. Some progress has been made in the voluntary cutback effort, but spokesmen said here this week that nationwide cooperation has been found to be "an impossible task."

USDA STUDY

(Continued from page 1)

possibilities of developing a self-help stabilization program under provisions of the Agricultural Act of 1961.

At that meeting, industry representatives pointed out that under the new marketing authority contained in the Agricultural Act of 1961 a market order for turkeys and/or turkey hatching eggs was possible and needed to be explored.

The newly named Turkey Advisory Committee, composed of members selected from all segments of the industry, was meeting in Washington, D.C., Oct. 12 and 13, to explore this possibility and to advise the secretary on the need for legislation and other matters of importance to the turkey industry.

If the committee recommends a marketing order in its self-help program, it could be issued by the Secretary only after public hearings, approval of a workable plan for market stabilization, and approval by a two thirds majority of producers voting in referendum.

Enabling legislation for issuance of a marketing order permits the industry to regulate, at the handler level, the marketing of turkeys and turkey hatching eggs, to divert excess supplies from normal market channels to other outlets, and to carry on marketing research and development.

Edwin Jaenke, associate administrator, Agricultural Stabilization and Conservation Service, will be the official USDA representative on the committee, and Richard C. Larkin, Agricultural Marketing Service, will be the executive secretary.

Committee Members

Members of the committee include:

Alabama: W. B. Howard, Phenix City.

Arkansas: Pat Teague, Berryville.

California: Robert McPherrin, Sunnymead; Frank Creager, Sanger, and I. A. Barlos, Petaluma.

Colorado: Paul Bornhoft, Fleming.

Indiana: Leroy Brutus, alternate, Pine Village.

Illinois: Howard Kauffman, Waterman.

Iowa: Raymond A. Thompson, Ellsworth; Lorenz Helfter, New Haven; Kenneth Brooks, alternate, Story City, and Alden Godwin, alternate, Indianola.

Kansas: Mrs. Jean Ingersoll, Michigan Valley.

Kentucky: Perry Browning, Winchester.

Maryland: Morris Smith, alternate, Ellicott City.

Michigan: Marvin DeWitt, Zeeland.

Minnesota: Howard E. Welsh, Rochester; C. N. Thurnbeck, Forest Lake; Lloyd Peterson, Paynesville, and Birger Nurminen, Aitkin.

Missouri: Carl Stout, Richland; Cecil Pitts, Goodson; Harry Thompson, alternate, Hopkins, and Joseph M. Morrow, alternate, Carthage.

New Hampshire: Peter C. Crafts, alternate, Grasmere.

North Dakota: Art Lanz, alternate, Devils Lake.

Ohio: Ira Swank, Rossburg, and Joseph Brook, alternate, Union City, Ind.

Oklahoma: Mike Hallren, Fairview.

Pennsylvania: Dean Mertz, Northumberland.

South Dakota: Ralph Mernaugh, Watertown.

Texas: B. H. Engellbrecht, Crawford; L. R. Sullivan, alternate, Waxahachie.

Utah: J. Arza Adams, Pleasant Grove.

Virginia: E. C. Compton, Standardsville.

Wisconsin: Wallace Jerome, Barron; Roland Misfeldt, Withee; E. J. Cashman, New Richmond; Hugo Herzog, alternate, Chilton, and Gordon Gardner, alternate, Spencer.

Since the formulation of the committee was first announced, USDA has announced the addition of six new members. Committee members named late this week were:

California: Everett W. Turner, Modesto.

Missouri: J. D. Sykes, St. Louis.

Oregon: Walter H. Schwedler, Portland.

Utah: Herbert Byers, Salt Lake City, and John Morgan (alternate), Layton.

Virginia: Chester Housh, Elkton.

MARKET TEST

(Continued from page 1)

it, according to Carroll Dunham, president.

Custom Farms plans an intensive three-month market test in Rochester, after which the trading area will be expanded. It will first market eggs, with arrangements to market poultry to be made at a later date, according to plans.

Custom Farms was founded by the Northeastern Poultry Producers Council, Trenton, N.J., but is now on its own. The firm will establish a trade mark, design its own carton, set up standards of quality control and franchise individual packers to use the name. The packers may pack eggs from any producers who meet Custom Farms standards.

Custom Farms has approved a grant to Cornell University, Ithaca, N.Y., for conducting the research program. Cornell research teams will check consumer preference in egg sizes, grades and brands, and will conduct weekly shelf studies in 20 to 24 Rochester super markets.

Mr. Dunham, the new company's president, is also president of NEPPCO. Other Custom Farms officers are: Oscar Turner, Livermore, Maine, vice president; Albert Palmateer, Elverson, Pa., secretary-treasurer, and Richard I. Ammon, NEPPCO executive secretary, assistant secretary-treasurer.

Other board members are: Harry Metz, Belleville, Pa.; Robert Graybill, Miller & Bushong, Inc., Rohrerstown, Pa.; Dean Webster, Jr., H. W. Webster Co., Lawrence, Mass.; C. H. Stains, Frenchtown, N.J., and William A. Haffert, Jr., Sea Isle City, N.J., editor of Broiler Business magazine.

TEXAS

(Continued from page 1)

Purdue University animal science department, noted that only recently has it been shown that under certain conditions cattle are poor converters of carotene to vitamin A. Any substance or metabolic process of the animal which interferes with this conversion will result in a vitamin A deficiency if carotene is the only source of vitamin A.

"It has been proposed that either nitrates or some unidentified substance contained in natural feedstuffs is inhibiting the conversion of carotene to vitamin A," Dr. Beeson said. "In most cases the fortification of the diet with 10,000 to 30,000 I.U. of vitamin A daily has either prevented or cured the sub-clinical as well as clinical symptoms of a vitamin A deficiency. As a result of research and feedlot data, the conversion ratio of carotene to vitamin A must be revalued for ruminants. Stress factors such as heat, shipping and disease have definite influence on the vitamin A requirements of cattle."

Dr. Beeson said recent tests at Purdue point to 20,000 I.U. of synthetic vitamin A as the minimum daily requirement for steer calves when fed no alfalfa.

The Purdue scientist noted that it has been shown that beef cattle suffer from heat more when their ration is low in vitamin A than when it is adequate. Also, tests indicate that response to vitamin A supplementation is better in warm or hot weather.

In a Purdue test it was observed that during the summer heat, steers on low vitamin A intake went off feed, gained poorly and exhibited clinical symptoms of vitamin A deficiency.

"Basic research has shown that high temperatures depress the secretion of thyroxine from the thyroid gland," he said. "Also, research with various species has revealed that thyroid activity and secretion have a definite influence on the conversion of carotene to vitamin A."

It has been found in tests that the depression of the thyroid gland by feeding tapazole, a thyroid inhibitor, resulted in a severe vitamin A deficiency in cattle unless synthetic vitamin A was fed. "These data," Dr. Beeson noted, "suggest the close interrelationship between thyroid activity and the conversion of carotene to vitamin A."

There is a close correlation between vitamin A intake and liver stores, according to Dr. Beeson. "Various tissues of the body, such as kidney fat, external fat, lean, tongue, heart and lung, had little ability to store vitamin A at normal levels of vitamin A intake," he said. "At extremely high

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
August 5	1,167	307	805	822	98	891	1,821	1,971
August 12	1,190	245	762	851	74	858	1,570	2,263
August 19	1,169	334	794	766	77	838	1,822	2,034
August 26	1,211	294	665	751	69	761	1,529	2,246
September 2	1,102	319	686	693	112	744	1,580	2,085
September 9	1,240	268	736	613	57	787	1,623	1,914
September 16	1,138	284	683	658	74	643	1,518	1,945
September 23	674	269	655	521	72	639	1,407	1,918
September 30	1,126	291	625	478	57	649	1,379	1,937
October 7	1,137	253	644	494	56	573	1,355	1,667

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
August 5	891	535	3,544	440	7,310	262	4,077	2,728
August 12	912	396	3,403	473	6,769	204	3,986	2,659
August 19	825	458	3,408	415	6,555	216	3,816	2,525
August 26	905	352	3,313	444	6,055	203	3,725	2,538
September 2	807	340	3,205	380	6,017	243	3,551	2,402
September 16	817	249	3,130	363	5,834	199	3,343	2,134
September 9	818	381	3,205	385	6,129	220	3,401	2,225
September 23	682	369	2,989	345	5,661	216	3,286	2,098
September 30	736	247	3,029	379	5,712	156	3,376	2,156
October 7	739	245	2,979	348	5,325	151	3,388	2,001

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1961	1960
August 5	4,593	491	2,522	361	231	1,192	37,059	32,956
August 12	4,557	453	2,442	360	235	1,151	36,013	31,876
August 19	4,135	433	2,368	301	208	1,191	34,688	30,816
August 26	4,177	403	2,340	351	181	1,118	33,631	30,035
September 2	3,996	378	2,209	298	200	1,098	32,525	29,496
September 9	3,765	381	2,056	269	188	1,081	31,742	29,246
September 16	3,713	368	1,922	225	170	979	30,389	28,624
September 23	3,564	382	1,816	282	141	980	28,966	28,656
September 30	3,616	402	1,782	234	176	1,067	29,610	28,551
October 7	3,579	394	1,666	296	176	1,082	28,548	28,442

levels, appreciable vitamin A was stored in the fat."

Recent investigations have added more evidence to the belief that a steer requires about 40,000 I.U. of vitamin A daily to maintain liver stores. "However," Dr. Beeson noted, "this does not mean that a 40,000 I.U. level is necessary for optimum gain and feed efficiency."

He said it had been observed that plasma vitamin A levels are more closely associated with vitamin A fed than liver stores.

URINARY CALCULI—Pending the establishment of limits or ranges of mineral composition within which a ration must fall in order to be relatively free of calculi, Dr. H. R. Crookshank of the U.S. Department of Agriculture beef cattle research branch in Texas suggested the following practices for minimizing losses from urinary calculi:

"1. Hold high phosphorus containing feeds to a minimum in wether lamb rations, and hold high calcium containing feeds to a minimum in steer rations.

"2. Include ammonium chloride in the ration for both wethers and steers.

"3. Provide an adequate supply of clean water at all times. And, if possible, warm the water supply in the winter, especially in areas where the water tends to freeze over.

"4. Avoid excessive administration of estrogenic substances such as diethylstilbestrol because high levels stimulate calculi formation."

PROGRESS AND POTENTIALS FOR CATTLE FEEDING IN TEXAS—An eastern shift in the center of Texas' cattle population during the past decade was noted by Lloyd Bergsma, director, cattle feeders division, Texas and Southwestern Cattle Raisers Assn. "Land that once grew cotton and corn is today sodded with improved grasses which provide excellent feed for expanded livestock operations," he said.

He also noted that younger cattle, which are more efficient converters of feeds to beef, have replaced 3- to 5-year-old steers grazing ranges. "How long will it be before a yearling is out of date?" he asked.

Another trend in Texas' new cattle industry era is the development of cattle feeding. Fed cattle marketed from Texas feedlots during 1960 totaled 477,000, an increase of 110% in six years. On April 1, 1961, the number of cattle on feed in Texas was up 35% from the same date in 1960. And on July 1 of this year, the number on feed had reached 180,000, a gain of 4% from the same date in 1960 and the highest level of feeding in Texas for this date since the reporting of numbers on feed started.

Mr. Bergsma cited a feedlot survey conducted by the Texas Agricultural Extension Service early in 1961. This survey indicated that Texas had a feedlot capacity of 390,000 head in feedlots with 250 head capacity and above.

"I am confident that the cattle feeding industry in Texas and the Southwest will continue to expand and that this expansion will be on a sound basis and the cattle feeding industry will become increasingly important to the total economy of the area," Mr. Bergsma commented.

He said the organization he represents expects the development of cattle feeding in the Southwest to take the following routes:

1. A large percentage of the cattle feeding will be carried on in relatively large, highly efficient commercial lots. Mechanization will be utilized in reducing cost of operation.

2. An increase in custom feeding is likely. Packers, retail stores and others will be supplying the necessary capital for many of these expanding operations.

3. Demand for beef will continue to expand. Because of the consumer's preference for uniformity and quality, fed beef will make up an increasing portion of total beef consumption.

METHODS USED IN LARGER FEEDLOTS FOR MARKETING FAT CATTLE—Joe Finley, Callaghan Ranch, Encinal, Texas, whose business interests are in both raising feeder cattle and feeding beef, advised feedlot operators to not contemplate profits when buying cattle. "Purchases of feeder cattle should always be contemplated to return only the cost of the animals bought," he said. "It is wise to think that the worst that may happen is that the market may return your costs."

For cattle to be sold right, he said, they must first be bought right. "This means," Mr. Finley added, "the animals must be bought or owned and fed to meet the competition. . . . The most consistently good sales are made to regular buyers buying from feedlots that do produce a carcass, when on the rail, that is all that both buyer and seller know and expect it to be."

PFIZER

(Continued from page 7)

rected to the laboratory, a complete report of the diagnosis and recommendations for control will be available immediately to growers upon completion of the standard diagnosis. However, in the diagnosis of livestock diseases, all final reports from the Pfizer laboratory will go direct to local veterinarians for handling.

Mr. Thompson noted that the Minnesota laboratory was the fourth such facility to be established and operated by the firm's agricultural division.

"In other areas," Mr. Thompson concluded, "we have found from experience that such a laboratory as the one to be located at Willmar is well accepted by all people in the state. Such a facility makes a contribution to the effectiveness of laboratories operated by state and college authorities.

"Working in complete cooperation with these authorities, a sound diagnostic service aids materially in helping poultrymen and farmers overcome disease problems that cause losses and lower farm income," the Pfizer executive stated.

The laboratory at Willmar will contain isolation wards for birds and animals, a large autopsy room with facilities for complete and accurate diagnosis including histopathology. Private conference rooms will be utilized for consulting with visiting growers.

"On-the-spot autopsy and diagnosis, followed by prompt and impartial prescription of proper medication, will be available free-of-charge five days a week to any producer in Minnesota, regardless of size of operation," Pfizer said.

At the present, Pfizer operates poultry diagnostic laboratories at Cullman, Ala., and Forest, Miss. A similar facility is nearing completion at Springdale, Ark. They are located in the heart of the broiler-growing areas in those states.

VITAMIN A

(Continued from page 6)

fere with the conversion of carotene to vitamin A.

(6) Can breed, environmental or management factors affect the ruminant carotene to A conversion ratio?

A good example of breed difference in ability to convert carotene to vitamin A is the difference between Holstein and Guernsey dairy cattle. The main reason why Holstein milk is white is that she can convert yellow carotene to almost white vitamin A whereas Guernsey milk is yellow or "golden" because she does not convert carotene to vitamin A nearly as completely as the Holstein cow.

(7) Does urea affect conversion of carotene to vitamin A?

Work conducted at the North Dakota station indicated that the presence of urea in mixed feeds did not accelerate the loss of vitamin A.

(C) ASSAY

(1) Just how meaningful is a "good" vitamin A assay?

A vitamin A assay of a feedstuff or a mixture of feedstuffs is no better than the quality of sampling. Many of the vitamin A concentrates are so concentrated that any but the very best of sampling techniques may not give a very representative assay. Furthermore, the assay is good only for the day on which the assay was made and may not be indicative of the level of vitamin A contained some two weeks hence, for example.

(2) Is there any reliable assay method for determining biological availability of carotene to ruminants? Monogastrics?

There is no chemical reliable method for determining biological availability of carotene to animals. As has been pointed out, even breeds within a specie may vary in their ability to convert carotene to vitamin A.

(3) What assay method is best for pro A or carotene in dry roughages? Silages? Fresh forages?

Currently accepted A.O.A.C. methods should be used as guideposts. This group of chemists stays quite current and will be ready to adopt new, more accurate methods of analysis when they are developed.

(4) What assay method is preferable to determine vitamin A levels in the blood? In liver tissue?

A.O.A.C.

(5) Is there any method available to determine liver A content without biopsy?

Not unless the animal is sacrificed.

(6) What correlation is there between liver and serum levels of vitamin A?

Serum levels of vitamin A are more nearly correlated with the level fed. Liver vitamin A levels correlate with serum vitamin A level in the median ranges. However, with either a very high level or a very low level of vitamin A feeding, serum levels reflect level fed better than do the liver levels.

D. AVAILABILITY

(1) Discuss sources of A (with emphasis on the value of corn).

Plants contain no vitamin A as such. Green plants and yellow portions of the plant contain varying amounts of carotene which animals can convert to varying amounts of vitamin A. The richest natural sources of vitamin A are found in fish liver oils.

(2) Discuss factors that influence absorption of carotene (and vitamin A). Does the amount ingested influence absorption?

If very low levels of carotene are fed, it seems reasonable that animals will absorb a higher percentage of their intake than if massive amounts are fed. Since carotene and vitamin A are fat soluble, things that enhance the absorption of fat would enhance the absorption of carotene and vitamin A.

(3) What has been the relative deficiency alleviating effectiveness of carotene and vitamin A when fed side by side under controlled research conditions?

This depends upon the particular animal. For animals that convert carotene to vitamin A readily, carotene should have a similar efficacy to vitamin A.

(4) Is the all trans isomer from vitamin A palmitate completely adequate for poultry and livestock requirements—or should some cis isomer be present?

It would appear that the trans isomer is the isomer of first choice.

(5) How significant are blood and/or liver vitamin A values in predicting feedlot performance, deficiency alleviation, ration adequacy, or true biological availability of a given vitamin A. supplement?

Only in the case of a very low level of liver storage would it be safe to predict performance on the basis of vitamin A storage. When stores are medium to high, performance is affected by a multiplicity of factors, including such things as inheritance, management, etc.

E. STABILITY

(1) Discuss the relative merits of gelatin coating versus other coatings, how resistant are they to moisture, temperature, pressure, etc.?

Each has its own merits. A discussion would virtually lead to competing one trade product with another.

(2) How much effect does the type, kind and amount of feed phosphate have on the stability of vitamin A in a mineral feed?

It seems that the trace mineral elements have a greater effect than the major mineral elements.

(3) How much effect does feed grade urea have on the stability of vitamin A in a cattle feed?

The only manner in which feed grade urea might affect the stability of vitamin A would be if the urea attracted moisture. Many typical moist conditions are deleterious to vitamin A.

(4) Which individual trace minerals have the greatest deleterious effect on this fat solution vitamin: Mn, Fe, Cu, Co, I or Zn? Are certain salts of these elements more destructive than others?

It is difficult to rank any one as more deleterious than the other. However, probably iron, copper and cobalt are somewhat more destructive than manganese and zinc .

MARKETS

(Continued from page 2)

tire line from pig starter to hog supplements is included in the booking plan. Complete hog feed business is showing signs of life and this, too, is included in the bookings.

Price lists continued their downward path a week ago, but expectations are for higher lists this week end. Uncertainty over the government's policy on surplus corn sales firmed up carbohydrate feeds while a small decrease in the indicated soybean production strengthened up protein ingredients.

Pacific Northwest

Formula feed trading continued on the slow side in Oregon, Washington and Idaho.

Volume movement of turkey rations was off in the face of continued heavy marketing of birds while the broiler feed demand eased as the production of this poultry class declined seasonally. Dairy and cattle feed sales showed slight improvement in the face of colder and wetter weather in principal producing sections.

Portland frying chicken listings held unchanged for the second straight week at 13 to 19¢ lb.

The egg-feed ratio looked less favorable this week when prices to producers declined 2¢ doz. across the board after advancing for two consecutive weeks.

North Portland livestock market prices were again irregular with slaughter steers selling unchanged and sheep bringing 25¢ cwt. high listings. Butcher hogs closed 25 to 50¢ cwt. lower for the second time this month.

Delmarva

The price of 20% broiler mash reflected the cheaper ingredients, averaging $89.97 per ton. This is the first time in a long time that feed prices have been below $90. Hog, dairy and laying hen feed all dropped slightly per ton.

Northern California

Volume of formula feeds is reported pretty much unchanged throughout the area. Manufacturers report normal operations, with most mills operating a five-day week.

Turkey and poultry feeds continue to occupy the larger part of most operations.

Mixers report increased demand for cattle and dairy feeds as pastures are beginning to dry up. Most stock has been moved from mountain range land to irrigated pastures and dry fall range land.

The maritime strike which has been resumed will affect the fish meals which are usually imported from South America.

Usage of barley for feed purposes remained light due to the attractive prices for nearby milo and corn.

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Abbott Laboratories .....
A-C-E Supply & Equip. Co. ..
Agri-Tech .....
Albumine Supply Co. .....
Allied Mills .....
Amburgo Company 50
American Cyanamid Co. ..26, 27
American Dehydrators Assn...
American Scientific Lab. 76
Anderson Box 31
Anderson, V. D., Co. 43
Arbor Acres Farm 36, 44
Archer-Daniels-Midland Co., Alfalfa Division 5
Aubrey & Co. 25

Baker Equipment Eng. Co. .. 14
Baker, H. J., & Bro., Inc... 37
Baroid Chemicals, Inc., Subsidiary of Nat'l Lead Co..
Baughman Mfg. Co., Inc. ...
Baxter, A. E., Engineering Co
Beardstown Mills .....
Bemis Bro. Bag Co. .....
Berg, Paul 24
Blatchford Calf Meal Co. ... 19
Blomfield-Swanson .....
Bonded Scale & Mach. Co. ... 103
Borden Co. .....
Bowman Feed Prod. 63
Bradley-Barr & Co. .....
Brock Mfg., Inc. .....
Brower Manufacturing Co. .. 19
Brown's Ledbrest, Inc. .....
Bryant Engineering Co. 30
Burlap Council 25
Burrows Equipment Co. 103
Butler Mfg. Co. .....

C-K Processing Co. 62
Calcium Carbonate Co. .....
California Pellet Mill Co. .. 74
Cardinal Scale Mfg. Co. ....
Carey Salt .....
Cargill, Inc. .....
Champion Portable Mill Co... 16
Chase Bag Co. 79
Checkerboard Grain Co. 14
Chick-Master Incubator Co... 71
Chore-Boy Mfg. Co. 66
Ciba Pharmaceutical Co. 82
Cleveland Vibrator 103
Clinton Corn Processing Co... 71
Clofine, Herbert K. 23
Clupak, Inc. 28
Cobb's Pedigreed Chicks, Inc. 65
Columbia Phosphate Co. .....
Columbia Quarry Co.
Columbian Steel Tank .....
Commercial Solvents Corp. 12, 13
Consolidated Blenders, Inc. ..
Consolidated Quarries Div., The Georgia Marble Co. ..
Consolidated Water Power & Paper Co. .....
Continental Grain .....
Continental Sales Co. .....
Corn Products Sales Co. ....
Credit & Financial Mgrs. Assn.
Custom Millers Supply Co. .. 72

Daffin Manufacturing Div. .. 63
Dannen Mills, Inc. 31
Darling & Co. 85
Davies, Wm., Co., Inc. .....
Davis Enterprises .....
Davis, H. C., Sons' Mfg. Co., Inc. .....
Dawe's Laboratories, Inc. 17
Day Company, The .....
Day, Joseph P., Co. .....
Daycom, Inc. 89
Dayton Bag & Burlap 25
Deere, John, Chemical .....
De Kalb Agr. Assn., Inc. ...
Devold, Peder .....
Diamond Alkali Co. .....

Diamond V Mills, Inc. .....
Distillation Products Industries 35
Distillers Feed Research Council .....
Doane Feed Products .....
Dodgen Industries .....
Dorn & Mitchell Laboratories.
Douglas Chemical Co. 52
Dow Chemical Co. 48, 49
Duplex Mill & Mfg. Co. 76

Easland, J. W., & Son Co...
Eastman Chemical Prod., Inc.
Ehrsam, J. B., & Sons Mfg. Co., The .....
Elanco Products Co.....40, 41, 73
Energy Mfg. Co. .....
Erie Mfg. .....
Eschenheimer, Rudy, Co. ....
Esheiman, John W. .....
Ewing, Ray, Co. 39

Ferret Lab. .....
Fischbein, Dave, Company ..
Flavor Corp. of America...
Food Mach. & Chem. Corp... 61
Forster Mfg. Co. 23
Fox Co. 22
Frontier Chemical .....
Fruen Milling Co. 79
Fuller Co. .....

General Mill Equipment Co..
Gerber Sheet Metal .....
Gland-O-Lac Co. 66
Grace, W. R., & Co. 47
Grain Belt Supply Co. .....
Grain Processing Corp. ....
Gump, B. F., Co. 44

Hales & Hunter Co. 32, 33
Hand, Peter, Foundation 3
Harris Lab. .....
Harshaw Chem. 95
Haugen, W. D., Co. .....
Hayes & Stolz Ind. Mfg. Co.
Heil Co., The .....
Heisdorf & Nelson Farms, Inc.
Henderson Mfg. .....
Henke Mfg. Co. .....
Hess & Clark, Inc. .....
Heterochemical Corp.....94, 95
Hoffmann-La Roche, Inc. .....
Hoffman-Taff, Inc. 64
Hogenson Const. Co. .....
Hogg, N. D., Ltd. .....
Holt Products .....
Honeggers' & Co. 100
Hooker Chemical 88
Hot Spot Detector .....
Howes, S. Co., Inc. 80, 81
Hubbell, Charles H. 81
Huss & Schliesper .....
Hy-Line Poultry .....

Ibberson, T. E., & Co. .....
Illinois Soy Products .....
International Minerals & Chemical Corp. .....
International Salt Co., Inc. .. 51
Iowa Limestone Co. .....

Jacobson Machine Works ... 98
Jersee Co. 101
Johnson, A. E., & Sons, Inc..

Kansas Soya Prod. Co., Inc....
Kees & Company 30
Kem Mfg. Co. .....
Kent Feeds .....
Keystone Steel & Wire .....
Kindstrom-Schmoll Co. .....
Koyker Mfg. Co. .....
Kraft Bag Corp. 50
Kraft Foods Co. 34

LaBudde Feed & Grain Co... 61
Landers Mach. Co. .....
Land O'Lakes Creameries, Inc. 14
Lauhoff Grain Co. 94
Leach Mfg. Co. 100
Limestone Products Corp. of America 72
Linwood Stone Prod. .....
Loncala Phosphate Co. .....

M-E-C Co. .....
McCabe Grain Co., Ltd. ....
McLeod, Frank .....
Magnus, Mabee & Reynard..
Maney Bros. Mill & Elev. Co. 4
Marion Feed Center .....
Mayo Shell Corp. 24
Merck & Co., Inc....9, 45, 69, 75
Meyer, C. W. .....
Micro-Tracers, Inc. .....
Mid-Continent Grain Co. 16
Mid-States Construction ....
Midwest Dried Milk Co. .....
Milbrew Co. .....
Miller, Mel, & Co., Inc. ....
Miller Publishing Co., The .
Minneapolis Sewing Mach. .
Monsanto Chemical .....
Moores Mfg. Co. 91
Morton Chemical Co. .....
Morton Salt Co. 91
Myers-Sherman Co. .....
Myzon Laboratories .....

Nagel, Herman, Co. .....
National Alfalfa Dehydrating & Mfg. Co. 112
National Distillers Products ..
National Molasses Co. 15
National Vitamin Prod. .....
Nationwide Leasing Co. 19, 82
Nellis Feed Co. .....
New Century Co., The .....
New England By-Prod. Corp...
Nichols, Incorporated 22
Nootbaar, H. V., & Co. ....
Napco Chemical Co. .....
North American Trading & Import Co. .....
Nor-Vell, Inc. .....

Oakes Mfg. .....
Olavarria & Co. .....
Oliver Machine Works .....
Oyster Shell Co. 80
Oyster Shell Prod. Co. 46

Pabst Brewing Co. .....
Paper, Calmenson & Co. 94
Park, Phillip R., Inc. .....
Parks, J. P., Inc. 107
Parrish & Heimbecker .....
Parrish, N. K. .....
Paxton Processing Co. 103
Pay Way Feed Mills, Inc. ...
Penick, S. B., & Co. .....
Peterson Breading Farm 83
Pfizer, Chas., & Co. 20, 21, 86, 87
Phelps Dodge .....
Pilch's Poultry 12
Pittsburgh Plate Glass Co. ..
Plass, Joe N., Co. 30
Pockman, L. A., Mfg. Co.... 51
Pope Testing Lab. .....
Poultry By-Products Assn. ... 96
Power Curve Conveyor .....
Prater Pulverizer Co. 92
Productive Acres Mfg. Co. .. 10
Products Blending Co. .....
Professional Feeds Div. ....
Publicker Industries, Inc. 11

Quaker Oats Co. .....

Ralston Purina Co. 67
Rapids Machinery Co. 36
Red River Alfalfa Co. .....
Reilly Tar & Chem. Corp. ..
Reliance Feed Co. .....
Reynolds & Co. .....
Richardson Scale Co. .....
Riley Feed .....
Ripco, Inc. .....
Roskamp Huller Co. .....
Ross Mach. & Mill Supply ..
Ryde & Co. .....

St. Regis Paper Co. .....
Salsbury's, Dr., Labs.....53-60
Schenley Distillers, Inc. .....
Schutte Pulverizer Co., Inc... 101
Scott Paper .....
Seagram, Joseph E., & Sons, Inc. .....
Sedberry, J. B. 52
Seedburo Equipment Co. 78
Sheffield Chemical .....
Shelby Mfg. .....
Shellbuilder Co. 97
Sievert, C. W. .....
Simonsen Mfg. Co. 71
Small, The W. J., Co. 5
Smith-Douglass Co., Inc. ...64, 65
Soft Phosphate Co. 44
Sohio Chemical Co. .....
Southwest Mill Supply Co. ...
Spencer Kellogg & Sons, Inc.
Sprout, Waldron & Co., Inc... 85
Squibb, E. R. 93
Stabilized Vitamins .....
Standard Brands, Inc...10, 98, 103
Sterol Derivatives, Inc. 34
Sterwin Chemicals Inc. 29
Stivers, T. E., Co. 28
Sudenga Industries .....
Sunset Feed & Grain Co. ... 23
Superior Boiler Works .....
Superior Feed Co. .....
Sutorbilt Corp. 83
Swanson, Carroll, Sales Co. .. 34
Sweet Mfg. .....
Swift & Co. .....

Taste Engineering Co. .....
Thomas Conveyor 97
Thompson-Hayward 77
Tierney-Gerber Roto Vent, Inc.
Toledo Scale .....
Toxite Laboratories 31

Ultra-Life Laboratories, Inc... 80
Union Bag-Camp Paper Corp.
Union Special Machine Co. ..
Universal Hoist Co. .....
Upjohn Co. 31

Val-A Co. .....
Vantrass, Chas., Farms, Inc... 84
Vineland Laboratories, Inc. ..
Vineland Poultry Lab. .....
Vitren Corp. 24
Vy Lactos Laboratories, Inc..

W-W Grinder Corporation .. 25
Warren Douglas .....
Wellens & Co. .....
Wells, Ralph, & Co. 84
Wenger Mixer Mfg. 68
Wertz Feed Products .....
Western Condensing Co. ...42, 43
Western Yeast Co. .....
West Fargo Mfg. Co. .....
West Va. Pulp & Paper Co...
White Shell Corp. .....
Whitmoyer Laboratories, Inc.. 79
Wilhoit Laboratory .....
Wilson & Co. .....
Wilson, R. S., Co. .....
Wilson Trailer Co. 99
Wirthmore Feeds .....

Young, John .....

TOP OF THE HOPPER

(Continued from page 2)

Just the other day, a Pacific Northwest nutritionist said to a southwestern feed man: "We're cutting our number of formulas in half and doing a lot less special mixing." His listener replied: "We're doing much the same thing. We're trying to convince our customers that our standard formulas will do a better job than an individual mix. Short-run special mixes cost more to produce than our long-run standard feeds."

˅ ˅

"IF WE CALMLY REVIEW the motives leading to the present debacle," says Nicholas Turkey News, "we would find that the turkey industry as a whole has defied most sound economic laws. These poor economic practices were caused in turn by a race for prestige, power and profit. We now have organizations with prestige and power, but it is doubtful that profit will appear this year."

The bulletin further comments: "It is time that the so-called leaders of the total poultry industry become realistic. We, in the turkey industry, cannot consider ourselves separate entities apart from the broiler producer and the table egg producer at this time."

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SOME FEED MANUFACTURERS have expressed alarm over the "sell" that the National Turkey Federation is applying in an effort to persuade the industry to consider some sort of government program aimed at improving price stability (Feedstuffs, Oct. 7). They contend that differences between marketing orders and production controls are really not significant in the final result. That is, if quotas are applied to processors (as handlers), control machinery of some kind obviously would have to be applied to production. Presumably, processors would have to determine from whom they would receive birds (and how many) to stay within their quotas. The question is raised as to how this would work, and whether or not actual, government-administered production controls would not be required to make the plant effective.

It is apparent that industry opinion is sharply divided as to the inherent risks of getting involved in any kind of a government program. Those who fear broad government encroachment on business say that having a little bit of control is like being a little bit pregnant.

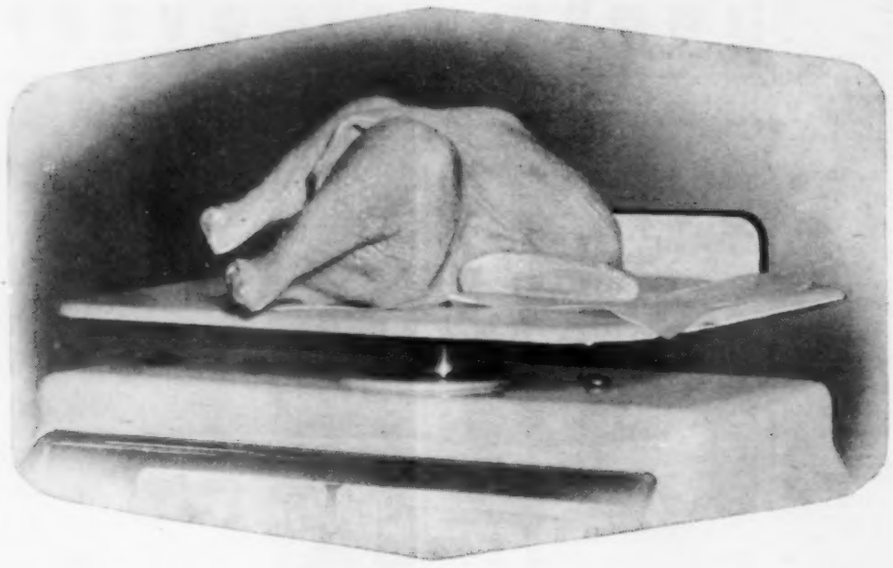
˅ ˅

THE GAIN IN YIELD per acre for U.S. crops has been widely publicized. In contrast, the growth in cattle productivity has received little attention, the First National Bank of Chicago points out in its Business and Economic Review. This gain in beef productivity is a factor of significant importance to U.S. agriculture.

"Cattle productivity measures the weight gained or the equivalent beef produced per head of cattle in a herd from one year to the next," it says. "Since 1920 the average live weight of U.S. cattle per animal has increased 69% while cattle numbers themselves have gone up 38%. This means that the ability of cattlemen to meet the growth in national consumption of beef and veal is more the result of gains in meat productivity than an increase in the cattle population.

"The significance of this increase can be illustrated by examining cattle numbers in other countries. Although such important producers as Argentina and Brazil combined have 20% more cattle than the U.S., their annual beef and veal production is only half as large."

Better feeding and better breeding have played a part in this development. Also, a decrease in calf slaughter has been a factor, increasing the average cattle weight by the natural process of allowing more calves to grow to maturity. Also, 20% fewer cattle die today than in the 20's.



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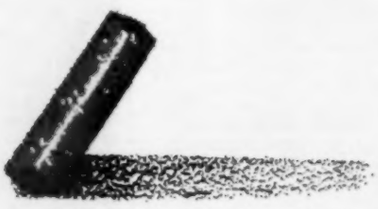

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